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Well that snuck up on us rather quickly – this is our 250th issue of *BMW Car* – and while we were tempted to do another celebratory issue we're still reeling from putting together our 20th anniversary issue last year – it nearly killed us!

We've not been sitting back and resting though so there's still a jam-packed issue to look forward to and I'd like to get the ball rolling by reflecting on the Geneva Motor Show as I've literally just returned from it. I do need to have a word with the organisers though – having a press day two days before the magazine has to go to print does make life a little hectic. While BMW was obviously my main focus of the event, one couldn't help but be blown away by some of the machinery on show, and this year it was a vintage show for fans of the performance car. Ford was showcasing its new Focus RS, Mustang and reinvention of the GT, and I have to say I think the latter is utterly stunning and exactly the sort of machine that BMW needs to build for its 100th birthday celebrations next year.

Bentley revealed its EXP 10 Speed 6 Concept which to my eyes looked good from the rear but was utterly gapping from the front; Aston Martin showed its Vantage GT3 and totally irrelevant track-only £1.8 million Vulcan as well as an electric four-wheel drive, and Ferrari pulled the wraps off its 488 GTB although I couldn't actually see it for the mass of people trying to catch a glimpse of it. Porsche revealed its 911 GT3 RS and the Cayman GT4 and Audi seemed to have a plethora of new R8s to unveil. And BMW had a front-wheel drive seven-seat MPV...

Traditionally, Geneva isn't where BMW reveals its next big thing so it shouldn't have come as too much of a surprise but one couldn't help feeling a little underwhelmed with BMW's presence at the show. Even the face-lifted 1 Series and 6 Series were hiding their lights under a bushel – there was just one LCI 1 Series in evidence on the stand!

Fortunately, Alpina more than made up for the lack of performance models on the BMW stand by bringing along its Edition 50 version of the B5 Bi-Turbo Saloon to Geneva. You can read more about it in our show report but in short it has 600hp, will do over 200mph and has an array of delicious detailing and clever tech. The only shame is that there will be just 50 Edition 50 Fives and the same number of 6 Series versions. A surefire collector's car of the future. Which brings us nicely on to another super-rare Alpina, the Roadster RLE that you can read about on page 30. For those of you not fully versed in Alpina folklore this was the company's take on the Z1 and while the upgrades were subtle it's now become a hugely collectible machine and was a delightful thing to drive.

Bob Harper, Editor



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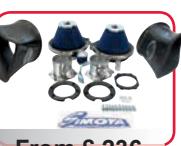
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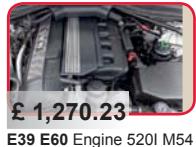
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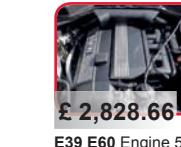
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THE ULTIMATE BMW MAGAZINE

ISSUE 250 APRIL 2015



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- 016 New Products** Everything that's new and for you and your car this month.
- 020 Missing a Trick?** We might not be getting the X4 20i over here but we still took the chance to try one out abroad.
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- 058 M3 Ultimate Guide** As the E9x M3 becomes cheaper we cover all you could ever need to know when buying one.
- 068 All in One** A trip to Saxon Motorsport to see its fine array of 1 Series road and race cars leaves us rather impressed.
- 078 What's Involved?** A very thorough aftermarket brake kit test for the E92 M3 yields some surprising results.
- 086 Tech Focus** A comprehensive rundown on all the E and F model numbers.
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- 114 BMW Concepts** This month we look at the iconic Turbo Concept from 1972.



The 2 Series Gran Tourer offers plenty of interior accommodation with flexible layouts



Seven-seat 2 Series makes its debut

Look away now BMW traditionalists as if the front-wheel drive Active Tourer didn't float your boat the new seven-seater MPV, the 2 Series Gran Tourer, will be sure to upset you further. This is not a sector in which BMW has previously been represented but with its 2 Series Active Tourer and now the Gran Tourer it will now be able to appeal to customers to whom its more traditional line-up of two-door coupés, four-door saloons and five-door Tourings have limited appeal. The world, or more specifically the world of the 20- to 30-something family buyer, has fallen hook, line and sinker for the MPV as a convenient way of transporting the family, pets and associated detritus around the country and it was only a matter of time before BMW decided that it wanted a slice of the pie. There's money in these vehicles and it would have been somewhat perverse if BMW hadn't joined the party – it doesn't seem to have done Mercedes any harm after all.

So, what do we have here with the Gran Tourer? It's obviously closely associated with the Active Tourer... but bigger. We could just leave it at that but that would be selling it short and while the 2 Series 'GT' (the shortened moniker just seems so wrong on an MPV) won't float everyone's boat those who feel the need for this type of machine will no doubt want to know a little more. The Gran Tourer is 214mm longer than the Active Tourer, but at an overall length of 4556mm it's still comfortably shorter (by 68mm) than a 3 Series Saloon. The Gran Tourer also has a longer wheelbase (by 110mm) than the Active Tourer so there really should be acres of rear seat legroom in there as we were hugely impressed by the amount of space in the AT. The Gran Tourer is also 53mm higher than its smaller sibling to ensure that there's enough rear headroom for those in the third row of seats.

In the UK that seven-seat configuration will be a standard fitment (in other markets the third row of

seats will be an option) and when not in use they fold flat into the boot floor. The load space can be extended or shortened as the middle row of seats can be slid fore or aft by 130mm and depending on configuration its load space will extend from 560 to 1820 litres while 40:20:40 split folding rear seats will ensure that awkward loads can be accommodated without adversely affecting passenger carry ability.

In the UK there will be five distinct models – two petrol and three diesel – and these will all use versions of BMW's new three- and four-cylinder engines. In the UK the entry-level machine (in terms of price) will be the 218i that offers 136hp and 162lb ft of torque from its three-cylinder 1499cc engine with the promise of 0-62mph in 9.8 seconds, a top speed of 127mph and economy and emissions figures of 53.3mpg and 123g/km according to the official stats. The next model up is the £25,110 216d which is again powered by a three-cylinder engine, although this time drinking diesel. It has a capacity of 1496cc and offers 116hp and 199lb ft of torque and will be a more sedan performer taking a leisurely 11.4 seconds to reach 62mph and managing just 119mph flat out. It does hit back though with 68.9mpg and 108g/km – figures which should find it plenty of admirers.

The 218d weighs in at £26,255 and if you look at the raw stats it looks like it would definitely be worth finding the additional £1145 over the 216d as not only do you get four-cylinders with the new B47 engine but you have 150hp and 243lb ft at your disposal which should be good for a 0-62mph time of 9.5 seconds and a 127mph top speed yet still have the capability of returning 64.2mpg on the combined cycle and 115g/km of CO₂.

The top dogs as far as price and performance are concerned are the 220i and the 220d xDrive. The former develops 192hp and 206lb ft while the

latter (which will only be available as four-wheel drive with the eight-speed auto) delivers 190hp and 295lb ft. Both should be more sprightly performers offering sub eight-second 0-62mph times and top speeds in the high 130s. The petrol will return 44.8mpg while the diesel trumps that at 57.6mpg. Prices for the 2.0-litre badged models start at £27,490 for the 220i and £32,005 for the four-wheel drive diesel.

All models bar the 220d will come as standard equipped with the six-speed manual gearbox and as an option the two three-cylinder machines can be spec'd with a six-speed Steptronic gearbox while the 218d and 220i receive the eight-speed auto if you prefer the car to take care of swapping cogs. As you'd expect, all models benefit from the full range of BMW's EfficientDynamics technologies along with the now familiar Driving Experience Control switch enabling you to select Comfort, Sport and Eco Pro modes depending on how fast you need to get to your destination. If the adjustable dampers are optioned then the same switch adjusts the suspension, too.

For the UK there will be the four familiar trim levels that you can order with most models – SE, Sport, Luxury and M Sport. All models come with seven seats, high-quality AM/FM radio, Bluetooth with audio streaming, iDrive, a 6.5-inch monitor, two-zone air-con, rear PDC and a multi-function steering wheel. Sport adds 17-inch alloys, sports seats and exterior detailing in High-gloss black. Luxury brings chrome and wood trim, leather upholstery and a different set of 17-inch alloys while M Sport brings the expected aerokit, High-gloss shadowline trim, leather sports seats, an M multi-function steering wheel, 18-inch alloys and a 10mm drop in suspension height. The 2 Series Gran Tourer will go on sale in the UK on 9 June and will cost from £24,175 for the 218i SE.





MSV and BMW renew partnership

MotorSport Vision (MSV) has extended its partnership with BMW UK, making BMW's high-performance M cars available to thousands of enthusiasts at some of the UK's best motor racing circuits for another three years. As part of the new agreement, the M3 Coupé, previously featured in MSV driving experiences, will be replaced this spring by its successor, the lighter and faster M4 Coupé. The M4 Coupé will be available to drive with the RaceMaster and M4 Master experiences from May onwards at Brands Hatch in

Kent and Oulton Park in Cheshire, and the M4 Coupé GTP will be part of the PalmerSport corporate driving event at Bedford Autodrome from March.

In the five years since MSV and BMW first entered into a partnership, more than 90,000 guests have driven BMWs at speed, with expert instruction, at MSV venues. For further information about MSV driving experiences visit www.msvdrivinggifts.com and for information about PalmerSport go to www.palmersport.com



South African milestone

As February drew to a close, BMW South Africa was celebrating the milestone of producing its one millionth vehicle at its Rosslyn plant.

Plant Rosslyn was the BMW Group's first plant outside of Germany and was set up in 1973 and has grown to become a key link in its global production network – in 2014 alone its 2900 workers at the site built an impressive 68,771 BMW 3 Series Saloons for local and export sales.

"Globalisation has been an inherent part of our

corporate strategy for more than four decades," commented Harald Krüger, member of the Management Board of BMW AG responsible for production. "Plant Rosslyn was BMW Group's first foreign plant and represents a cornerstone of our global production network with presently 30 sites in 14 countries. To this day, the South African production site remains a vivid example of a successful market entry through local production," said Krüger.



M6 GT3 goes testing

At the end of February BMW's latest weapon of choice for GT racing, the M6 GT3, embarked upon its first testing steps at Monteblanco in Spain. The car's initial roll out had taken place earlier in the month when Jörg Müller drove the car at the test track at the Dingolfing plant. In Spain, works drivers Lucas Luhr and Maxime Martin were at the wheel as its engineers continued the extensive development programme with the prototype GT car. "The engine really impressed me. It is powerful and has good torque, which is important for a car like this. I am confident that BMW Motorsport will provide its customers with a fantastic racing car in the BMW M6 GT3," commented Müller after his first drive.

The M6 GT3 is powered by a 4.4-litre V8 M TwinPower Turbo production engine, which has been the subject of modifications for its use on the race track. It has dry sump lubrication and generates over 500hp, with a total car weight of less than 1300 kilograms. Further features of the BMW M6 GT3 include the transaxle drive concept, a six-speed sequential racing transmission, and powerful motorsport electronics. The chassis' aerodynamic properties were optimised in the BMW wind tunnel.



More gongs for the i8

Since its introduction, the plug-in hybrid sports car has done rather well as far as awards are concerned and it's just added two more to its bulging trophy cabinet after having been awarded Performance Car of the Year and UK Car of the Year at the UK Car of the Year awards. Since the car's introduction over 450 i8s have been registered in the UK making it the car's biggest market in Europe.



Shell becomes BMW Motorsport partner

When BMW Motorsport races in the DTM, the United SportsCar Championship (USCC) and the 24-hour race at the Nürburgring-Nordschleife in 2015, it will be joined by Shell as its new Premium Technology Partner. From 2015, Shell is the only "recommended supplier of genuine BMW engine oil" and "BMW's only recommended oil supplier for aftermarket engine oils". This exclusive cooperation is now being extended to the race track, where the teams will race on Shell Helix Ultra and Pennzoil Platinum engine oils. The Shell Helix Ultra logo will appear on all eight

M4 DTM race cars, as well as on the team apparel and drivers' helmets and overalls while the Shell BMW M4 DTM race car will also bear the company's striking red and yellow design.

BMW Motorsport engineers will also work alongside Shell scientists to develop high-performance oils for use in BMW Motorsport race cars. This development will be on-going during testing and the course of each respective race season. It will focus on sequential improvements of performance factors such as reducing friction and wear.



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powered by



Geneva Gems

All the BMW-related news from Europe's premier show

Words: Bob Harper Photography: Bob Harper/Newspress



The Geneva Motor Show traditionally kicks off the European show season and this year's event was jam-packed with high performance machinery. Virtually every manufacturer seemed to be demonstrating that while the legislators might be demanding lower and lower emissions there's still plenty of life left in the

performance car with Porsche showing the Cayman GT4 and the 911 GT3 RS, Audi unveiling a plethora of new R8s, and Aston Martin pulling the wraps off several mega-buck bruisers. And then there was BMW, keeping it real with the world's first view of what one observer dismissed rather unfavourably as

'BMW's Zafira'. The headline machine might not have been the most jaw-dropping one at the show but there was still plenty to see and if BMW wasn't majoring on high performance then AC Schnitzer and Alpina certainly were. Here's our whistle-stop tour of the BMW-related highlights from the show...



AC Schnitzer



It's some years since AC Schnitzer went to town with really wild show cars for its Geneva stand but despite this the M4 it had on display was pretty tasty. The car made its debut at Essen but since then it's been further honed with what Schnitzer describes as a 'Racing' aerokit. At the front there are carbon front spoiler extensions either side and a new front splitter that's painted in high-gloss black – carbon was considered but was deemed to be slightly too vulnerable as it's so close to the ground. Either side there are two little carbon winglets to further increase downforce on the front of the car.



At the back of Schnitzer's M4 there's a substantial rear spoiler that's mainly destined for the export market after the lower version of the wing was deemed to be too small for some markets. A carbon rear diffuser sits between the exhaust and the exhaust tips themselves are also clad in carbon. The car's lowered stance is thanks to a Clubsport suspension setup that's adjustable for compression and rebound.



Naturally enough Schnitzer has breathed a little extra life into the M4's S55 straight-six which now develops 510hp and 476lb ft of torque – gains of 79hp and 70lb ft. Its 0-62mph time has been improved by 0.1 of a second but the performance gain between 50-112mph (80-180km/h) gives a better idea of the improvements, dropping by 1.7 seconds over the standard car to 6.2 seconds.



You may well have spotted that both the M4 and the X6 pictured are both sporting AC Schnitzer's new wheel design, the ACS1, which will be available in 18-23-inch diameters. Running from left to right we have the Forged Racing wheel which is a multi-piece design available in 21-, 22- and 23-inch diameters, in the centre is the forged 20-inch one-piece wheel which will only be available in a 20-inch size, while on the right there's the one-piece cast AC1 that will be offered in 18-, 19-, 20- and 22-inch diameters.



While the M4 was the performance-orientated Schnitzer offering, the company also brought along its new generation of X6 with a new front skirt and rear diffuser. Along with a slightly lowered ride height and performance upgrades for several different models, it looks like a good upgrade for those who really want their X6 to stand out.

Alpina



While BMW was concentrating on its MPV, the Alpina stand was a breath of fresh air with talk of limited production numbers and 600hp outputs. The main star of the show was its Edition 50 version of the B5 Bi-Turbo shown in Saloon form, although a Touring is also available, as is a B6 Coupé and Convertible. It shouldn't come as a huge surprise that the model has been produced to celebrate 50 years of Alpina and its certainly a fitting tribute with plenty of delightful detailing.



The twin-turbo V8 has been given a comprehensive going over and now produces 600hp at 6000rpm along with a substantial 590lb ft of torque. 0-62mph takes a scant 4.2 seconds while 0-125mph is despatched in just 12.7 seconds on its way to a 204mph maximum. To help put the power down there's a revised Drexler limited-slip differential that's been designed to work in conjunction with the wider wheel and tyre setup.



Inside the Edition 50 Alpina has drawn inspiration from one of its other limited edition machines, the B7 S Coupé from 1982. There are black seats with their centres finished in Forest green with chequered yellow/black stitching. It doesn't sound like it would work but in the flesh looks fantastic. The dash is leather topped and there's piano black trim with Edition 50 script and Burkard Bovensiepen's signature.



The wheels for the Edition 50 were designed specifically for the model and are a forged design, saving nearly four kilos per wheel. When viewed dead-on they look pretty similar to the Classic Alpina wheel but when viewed at an angle cut outs along each spoke appear to give the wheels an even more intricate look. Nestling behind the wheels on the show car are optional 395mm front brake discs clamped by Brembo callipers painted in blue. The wheels themselves measure 9x20 inches at the front and 10x20 inches at the rear and are wrapped in 255/35 and 295/30 Michelin Pilot Super Sport tyres respectively.



Other highlights are the bespoke exhaust designed in partnership with Akrapovic that's made entirely of titanium, saving over 17 kilos when compared to an all stainless steel setup, and the exhaust also features an active exhaust valve to allow you to fully appreciate the engine's aural delights.



It wasn't all about the Edition 50 on the Alpina stand, though, as it had also brought along the face-lifted B6 Gran Coupé – a machine that's done extraordinarily well in the US since it made its debut there last year. Like the Edition 50 the Gran Coupé has also been endowed with the 600hp twin-turbo V8 and that, combined with the model's four-wheel drive setup, enables it to be the fastest accelerating Alpina ever made, with 0-62mph taking just 3.8 seconds. One interesting facet of the Alpina B6 Gran Coupé is that Alpina thought the bonnet looked a little bit anaemic for a 600hp machine so it has had the panel specially modified for the car with two bold lines running down the centre of the car which does add some aggression to the car – it's a nice touch and typical of the company's attention to detail.

It wasn't all about the twin-turbo V8 machinery on the Alpina stand, though, as the company also brought along a D4 Bi-Turbo Coupé and the face-lifted XD3 to remind us that these days, for many markets, your Alpina is much more likely to be sipping from the diesel pump. Both models have proved to be massively popular since their debuts and Alpina's only regret is that the production volumes for the XD3 are severely restricted as the car is built at the Spartanburg plant in the US and it could sell considerably more than it can actually manufacture!

NEWS: GENEVA SHOW

BMW



The big reveal on the BMW stand was for the 2 Series Gran Tourer and while you can read all about it on page 7 this did give us a chance to have a little bit of a crawl around the car. While rear legroom (for the middle row of seats) is very impressive, we did discover that the rear seats aren't really designed with six-foot adults in mind! One other thing that struck us as a little odd about the 2 Series 'GT' is that the 2.0-litre models feature twin-exit exhausts – one either side of the car – something BMW usually restricts to the higher performance models, such as the M235i.



Tucked away at the back of the stand was an M235i Coupé sporting the full range of M Performance accessories, and it did look good, especially with its painted lower front spoiler section.



As Switzerland is such a large market for xDrive models just about every car on display was of the four-wheel drive variety and many were sporting Individual paintwork, too. An X5 M50d looked particularly fetching in Ruby black with the show lighting really picking up on the Ruby rather than black tone. A face-lifted 650i xDrive Convertible showed off its minorly reshaped bumpers in Jatoba brown while a 435i xDrive Gran Coupé looked particularly fetching in BMW Individual Moonstone.





The full Monty.

WARRANTY-FRIENDLY UPGRADES FOR BMW M3/M4.

It's not often the AC Schnitzer engineers get to work on a brand new M car. So when the M4 arrived, they didn't hold back. A whopping 510hp was unleashed with an engine warranty that lets you sleep at night, along with a full program of upgrades including lowered suspension, forged alloy wheels, sports exhaust and aerodynamics to make the most of the increased muscle.

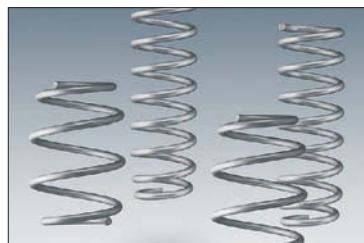
See our website for details, or call us for your nearest AC Schnitzer dealer.



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Model shown ACS4 Sport based on M4 Coupé (F82). Also available for M4 convertible (F83) and M3 (F80). E&OE. Finance available subject to status.

NEW PRODUCTS

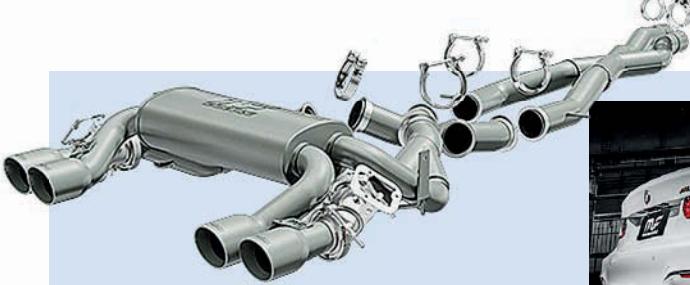
AP Racing brake kit for F10 5 Series

For those owners looking for a comprehensive braking upgrade for their F10, AP Racing has answered the call. Featuring its own Radi-CAL and carbon ceramic technologies the big brake kit features six-piston, lightweight callipers with 370mm floating discs. It's designed to suit vehicles fitted with 19-inch aftermarket wheels. Response is improved, braking effort is reduced and the kit is developed to resist fade. The callipers also feature dust seals and durable, anti-corrosion paint making them ideal for full time road use and there's a choice of red or black finishes.

Price: TBC

Contact: www.apracing.com





MagnaFlow exhaust for M3 and M4

The American-based brand MagnaFlow has just developed a cat-back exhaust system designed to improve the sound from the current S55 engine found in the M3 and M4 models. It retains the use of factory valves so it can still be driven quietly if need be, but on full-throttle the note changes to a more furious tone. It features a Tru-X crossover pipe, optional black or titanium finishes and is constructed entirely from stainless steel, with a lifetime warranty. Power gains of up to 10hp and 12lb ft of torque at the wheels can also be expected.

Price: POA
Contact: www.magnaflow.com



Milltek exhaust solutions for E36 M3

As the second generation of M3 becomes rarer and more valuable proud owners are seeking effective, tasteful enhancements, so exhaust specialist Milltek have developed an all-new system. Designed to fit all models including the coupé, convertible and saloon in both 3.0- and 3.2-litre guise, the system from the downpipe back gives improvements to both power and sound. There's also a back box option that is hand-finished with OEM style twin tailpipes and a there's a choice of either sports cats or cat bypass kits available to give a further increase in performance and throttle response. All parts are made from stainless steel in the UK.

Price: From £408

Contact: www.milltek.co.uk



Manhart MHX5 M

German tuner Manhart Racing has just announced details of its enhancement package for the current X5 and X6 M models. Power has been increased to a colossal 740hp with an accompanying torque figure of 701lb ft and that equates to some staggering performance; 0-62mph comes in just 3.9 seconds and top speed is 197mph for the giant SAV. The uprated suspension also lowers the car 20 and 25mm respectively and the monoblock wheels measure 22-inches in diameter. There's also a menacing looking aero kit consisting of a carbon fibre diffuser, mirror caps, bonnet vents and a front splitter.

Price: POA

Contact: www.manhart-racing.de





MOMO Quark steering wheel

A fresh new product from MOMO for the 2015 season is this steering wheel, named the Quark. It features striking blue inserts made from real leather and the iconic MOMO-Italy push button horn in the centre. The sculpted polyurethane rim has been ergonomically designed to offer both comfort and optimum grip in order to enhance the overall driving experience, making it ideal for both street and off-road use.

Price: £128.99

Contact: www.momo-uk.co.uk
or call 01268 764411



AEZ straight alloy

This striking new cast, single piece wheel from AEZ is simply named the Straight, due to the shape of its spokes. It features an elegant ten-spoke design with an interplay of dark and polished surfaces whilst the concave dish accentuates the aggressive lines. It comes in a range of fitments and sizes ranging from 17-inch to 20-inch, and is suitable for a large number of BMW applications.

Price: POA

Contact: www.aez-wheels.com

Autoglym Wheel Protector

Car cleaning expert Autoglym has launched a new and improved version of its wheel cleaner, which it states lasts up to 30 per cent longer than its rivals. Autoglym has developed a superior formulation that imparts a super hydrophobic film on to the wheel. It lasts up to six weeks, repelling brake dust and dirt, resulting in cleaner looking wheels between washes, which are easier to maintain.

Price: £9.99

Contact: www.autoglym.co.uk



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NEW PRODUCTS



KW Automotive coilover kit for M4

Owning a new M4 and plan on taking it to the track? KW Automotive has developed a Clubsport coilover kit for the car. The two-way adjustable coilovers offer a variety of compression and rebound settings, adjustable top mounts and it lowers the car between 15 and 40mm. Handling is also improved, body roll is reduced and steering is more precise. The adjustment also allows for particular driver preferences or to work in unison with other modifications.

Price: POA

Contact: www.kwautomotive.com



Cobra Nogaro seat

Respected seat manufacturer Cobra has just released its latest all-new seat design. Named the Nogaro, it's aimed at the fast road and track day market and has been designed to suit a wide variety of sports, classic and GT cars. It features a carefully sculptured shell to support the hips and shoulders but a lower profile seat bolster also allows quick and easy entry. This makes it ideal for comfortable everyday driving too. There is also a lightweight version made from carbon fibre, a 'Street' or 'Circuit' style to choose from and a range of trim choices.

Price: From £729

Contact: www.cobraseats.com



Bilstein B8 dampers

The hugely respected suspension manufacturer Bilstein has released a new line of finely engineered damper upgrades for a wide range of current 1, 2, 3 and 4 Series models, excluding xDrive applications. The B8 damper package helps to significantly enhance the dynamic abilities of each car, working in perfect harmony with either the OEM springs or any quality aftermarket offerings. All of these new dampers are also compatible with M Sport spring packages. The range is designed for those looking for more damping capability, with improved handling and reduced squat and dive, without ruining everyday ride comfort.

Price: From £130.80 per damper

Contact: www.bilstein.de or call 0116 2898345



Fidanza lightweight flywheel

An easy to way to improve your car's performance is by changing to a lightweight flywheel. Fidanza Performance can supply a flywheel constructed from 6061 T6 aluminium for optimum weight reduction and tensile strength. This, in-turn, delivers faster acceleration, quicker throttle response, better vehicle braking, increased clutch efficiency, and long lasting durability. The flywheel also features a precision machined, Rockwell hardened ring gear, along with Fidanza's signature replaceable friction surface. It is designed to fit a number of models, including the E53 X5 3.0i, E38 530i and 528i, E46 330i, 328i, 325i and 323i.

Price: POA

Contact: www.fidanza.com

Fantastic 4

Our latest 435i demo gets 'the Birds treatment' as our bespoke package transforms it from a gentleman's GT into a rip-roaring performance coupé



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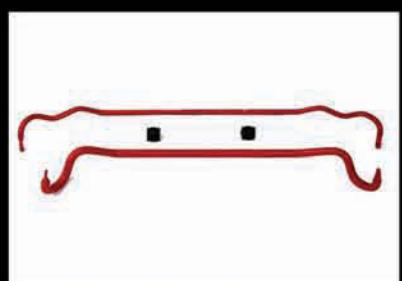
Birds B-Series Dynamics Packages for the latest 3 and 4 Series involves a combination of custom suspension and differential upgrades designed to transform the ride, handling and traction of the standard BMW;

B4 Sport Suspensions - Bilstein based dampers with bespoke damping curves perfectly matched to our B-Series sport springs.

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B4 Anti-Roll Bars - stiffer anti-roll bars eliminate roll and understeer, perfectly tuned to complement the LSD and suspension.

We do not settle for 'off-the-shelf' products and neither do our customers. If you want guaranteed, genuine bespoke performance upgrades for your BMW, speak to the experts at Birds. Engine, braking and other performance enhancements also available. Birds B-Series Dynamics Packages span 1, 2, 3, and 4 series variants.



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Missing. a trick?

In the UK you can't order a petrol X4 so we travel to Norway to put an xDrive20i through its paces to find out whether we're missing out. Words & photography: Steve Hall





Marbella, California, South Africa. Just three of the places manufacturers are sometimes keen to send us lucky magazine types in search of winter sunshine to show off the best of their latest wares, and perhaps hope the natural mood enhancing effect of 20°C temperatures will pervade the verdict of whatever new metal we're trying out.

So what chance this BMW X4, tried out here for the first time in 2.0i guise, married to an eight-speed automatic gearbox, and laden with an extensive checklist of equipment? Given that the temperatures are hovering just below zero at our pickup point at Oslo's Gardermoen airport, and the prospect of snow packed roads and -9°C lies ahead, you might suspect the verdict would be a foregone conclusion. As it happens, a Norwegian winter proves the perfect place to test the X4's mettle in an environment more extreme than anything we're likely to encounter on our island, and if nothing else will give a de facto impression of how your X4 might cope with the seemingly obligatory sojourn to Alpine ski slopes.

We were off on our own little snow and ice based adventure (see page 24 for more), and our friends at BMW Norway had kindly arranged to tie this in with a chance to sample the X4 in full winter mode, with aggressively ridged Nokian Hakkapeliitta R2 winter tyres making the best of the xDrive system's ability to find purchase. Base camp is the town of Gol, three hours north west of Oslo on a route which will test motorway comfort and B road abilities, before we push on past Gol to Lake Tisleifjorden for a preview of the events BMW Norway has in store for us. This will mean a good 20km on a surface which is white as far as the eye can see...

We get off to a good start. Our X4 is fitted with a nicely optioned interior which raises the feel-good factor the moment you climb in – brown leather seats are matched by similarly coloured inserts



throughout the cabin, just enough to give a semi bespoke feel. As with any X4, it's easy to find a comfortable driving position, and I'm glad for the powerful seat heaters doing their bit to fend off the sub zero ambient. The 2.0i petrol engine fires up to a near silent idle and we quietly drift out onto the motorway heading north.

It doesn't take long to realise that the Twin Power petrol engine is better suited to something lighter and more compact. A 320i or 120i are happy with this engine under the bonnet, but the X4's extra 150kg over an xDrive 3 Series seems to ask too much of the torque curve; consequently a hefty right foot and plenty of revs are required to get the X4 up to speed. This, in turn, delivers a double negative in that the previously refined and quiet motivations of the engine are replaced with a less than pleasing drone emanating through the bulkhead. Actual performance levels are fine, but it all feels strained; even the usually butter smooth eight-speed auto slurs shifts in a slow, deliberate fashion that encourages you to relax the pace. Economy takes a hit too – despite the majority of our time being spent cruising at 60mph, we barely broke the 30mpg barrier overall. Unless emissions or local policies dictate, we'd recommend the torque laden 2.0d over the 2.0i every time, and live with the slight increase in audible machinations up front.

To be fair, the majority of our trip is relaxing – the Business Nav guides us via the HUD, whilst the radar cruise control manipulates our speed; only the odd overtake prompts the worst of the engine's abilities. One thing Norwegian roads do uncover is the inadequacy of the auto wipers – months of snow, salt and grime combine to create a sludgy mess on most surfaces that the auto wipers don't register, so it'd be useful to have an intermittent setting to fall back on.

Soon, we reach the snow-covered roads where our winter tyres go from nice-to-have to necessary. On normal roads, the winters contribute to a welcome improvement in ride quality, the extra sidewall and softness of compound making for a loping pliancy alien to the usually optioned 19-inch wheels with sporting rubber. When the surface turns white, grip levels are impressive. You have to be circumspect and it's best only to ask the tyres to do one thing at a time – brake in a straight line, turn in, then let xDrive shuffle power around as you scurry off down the next straight. Mashing the brake gives an impressive demonstration of the retardation available – you can almost feel the tyres clawing into the surface.

We're lucky enough to get a few laps of an ice track with our X4, and whilst it's as far removed from normal use as you could imagine, it gives an exaggerated look at the dynamics in extremis... and of course, it's fun. With stability systems off, there's turn in oversteer followed by power understeer if you're heavy with the throttle – wait for the corner to open up, then you can gently add power and feel xDrive shuffling torque rewards for an amusingly sideways exit. Braking on pure ice is precarious, so we deliberately brake on the snow covered sections, where the X4 again delivers amazing retardation.

Frankly, the combined abilities of xDrive, winter tyres and the stability systems are well beyond that which most owners would ever expect, or need. It's easy to see why BMW built its own winter test centre in Arjeplog, Sweden – once your systems perform well in a Scandinavian winter, you can be sure they will be absolutely fine in the rest of the world. Our test pointed a magnifying glass at the X4, and it impressed with its unruffled all surface composure in the harshest of environments. ●

F26 xDrive 20i

ENGINE: Four-cylinder, petrol, turbo

CAPACITY: 1997cc

MAX POWER: 184hp @ 500-6250rpm

MAX TORQUE: 199lb ft @ 1250-4500rpm

TOP SPEED: 132mph

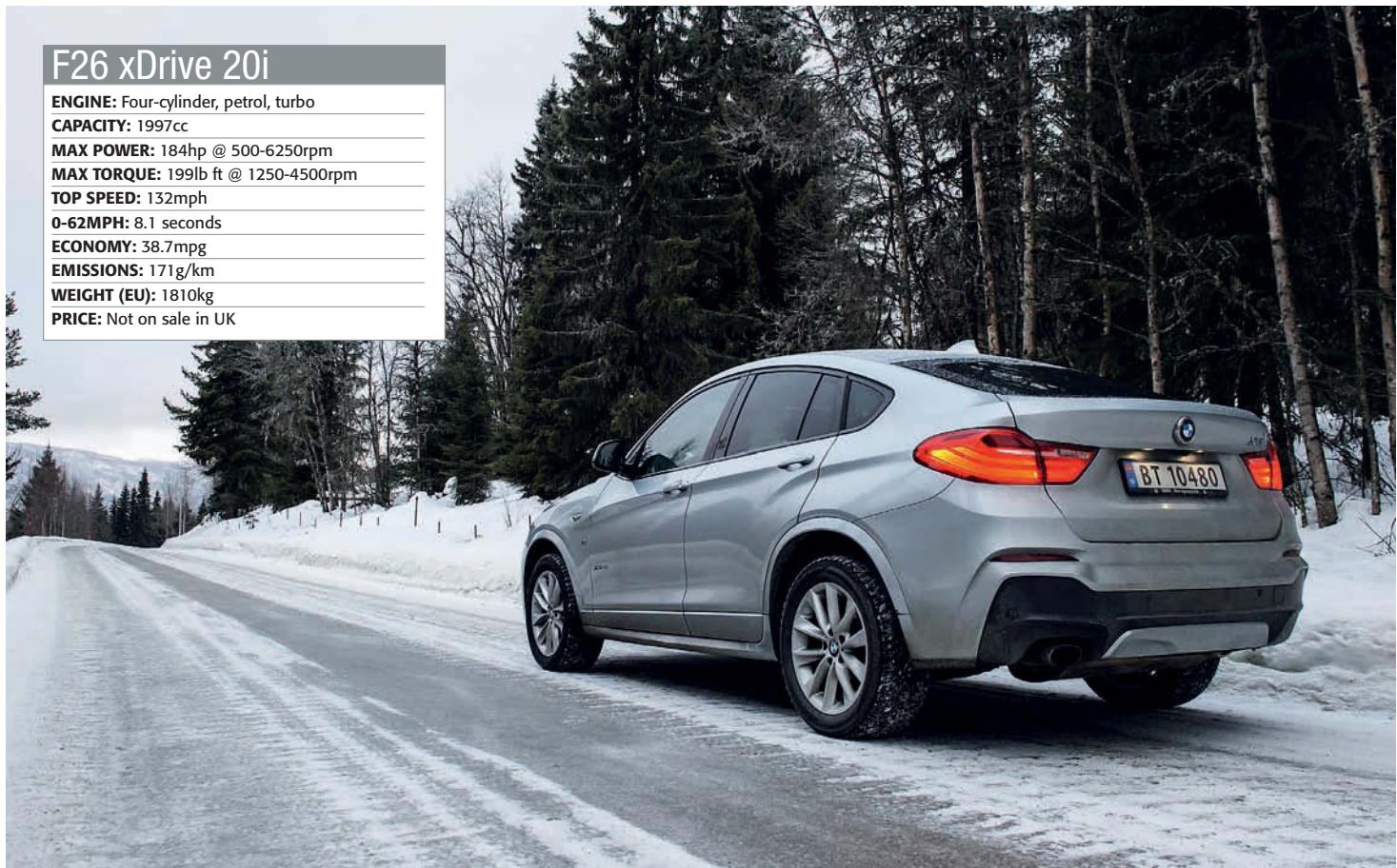
0-62MPH: 8.1 seconds

ECONOMY: 38.7mpg

EMISSIONS: 171g/km

WEIGHT (EU): 1810kg

PRICE: Not on sale in UK





The Original Groovers

Stunt driver and Tarox founder Gianni Taroni set about revolutionising the braking game as far back as the mid 70s. After developing F1 world championship winning brakes for Keke Rosberg, attentions turned to the road car market. In 83 Tarox manufactured the world's first ever grooved brake disc, which has since been developed into the range of styles that we offer today.

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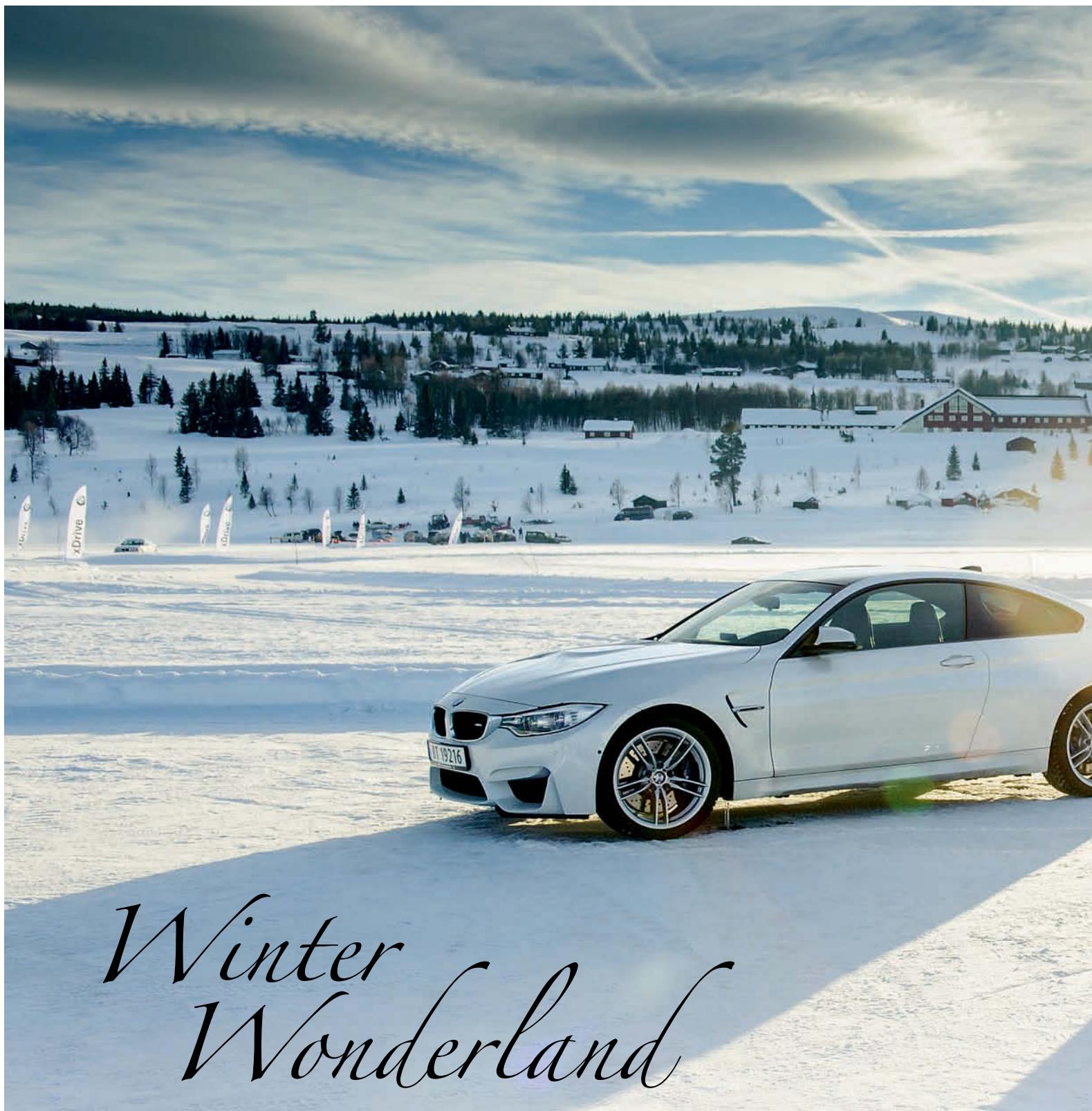
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Winter Wonderland

J uha Kankunen, Tommi Mäkinen, Stig Blomqvist... the list of Scandinavian world rally champions is long and illustrious. And if you've ever wondered why, a trip to Scandinavia – particularly a north bound sojourn – in the long winter season will deliver all the clues you could need, for anything off of the main roads are snow-bound most of the time. Therefore, you have three options; drive very slowly,

crash, or learn to become comfortable driving in a fashion which sees you sliding almost constantly, manipulating grip levels by balancing the car with both throttle and brake inputs. It also helps that so much of the beautiful Scandinavian landscape features lakes, which become frozen playgrounds in the long, dark months of winter, and so you have a place that's second-to-none for learning the craft of car control. Add to that the low temperatures found

in the north, and it's easy to see why this part of the world is the go-to place for winter testing. Every major manufacturer tests here now, and BMW was the first to open its own permanent test centre, 34 miles from the Arctic Circle in Arjeplog, Sweden back in 2006. The proliferation of xDrive in the last decade is clearly no coincidence...

Indeed, xDrive is becoming an ever-larger part of the BMW brand, and where better to test the latest



A trip to an ice covered lake in Scandinavia to take part in a BMW backed winter driving experience day is about as good as it gets for a lesson in car control, safety and technology... Words and pictures: Steve Hall

all-wheel drive models than on the 13.5 square kilometres of lake Tisleifjorden, located three hours north of Oslo? In comparison it takes 11 hours to reach Arjeplog from Stockholm, so the lake is a great venue for the BMW Winter Experience. Beautiful, accessible, and most importantly, we have an invite to the final day of running in mid-February.

The day starts with a hearty Scandinavian breakfast at the wonderful Golsfjell Fjellstue, a huge

wooden lodge overlooking the lake, which acts as base camp for the event. Suitably fuelled for a day spent in the middle of the lake at minus seven degrees celsius (mild for this time of year) we head to the briefing room where guests are taken through a comprehensive hour-long presentation where I ask event organiser Christian Lauenborg for more information on the Winter Experience: "We want people to have fun, but also to become better, safer

drivers," he tells me. It was clear from the images we were shown that this section focused strongly on driver education, with the presentation highlighting everything from sight lines to hazard perception, particularly on low grip surfaces. We finish up with a short health and safety briefing from our chief instructor for the day, and a short presentation about the current BMW and MINI range.

Then it's off to the lake. We jump into a dozen



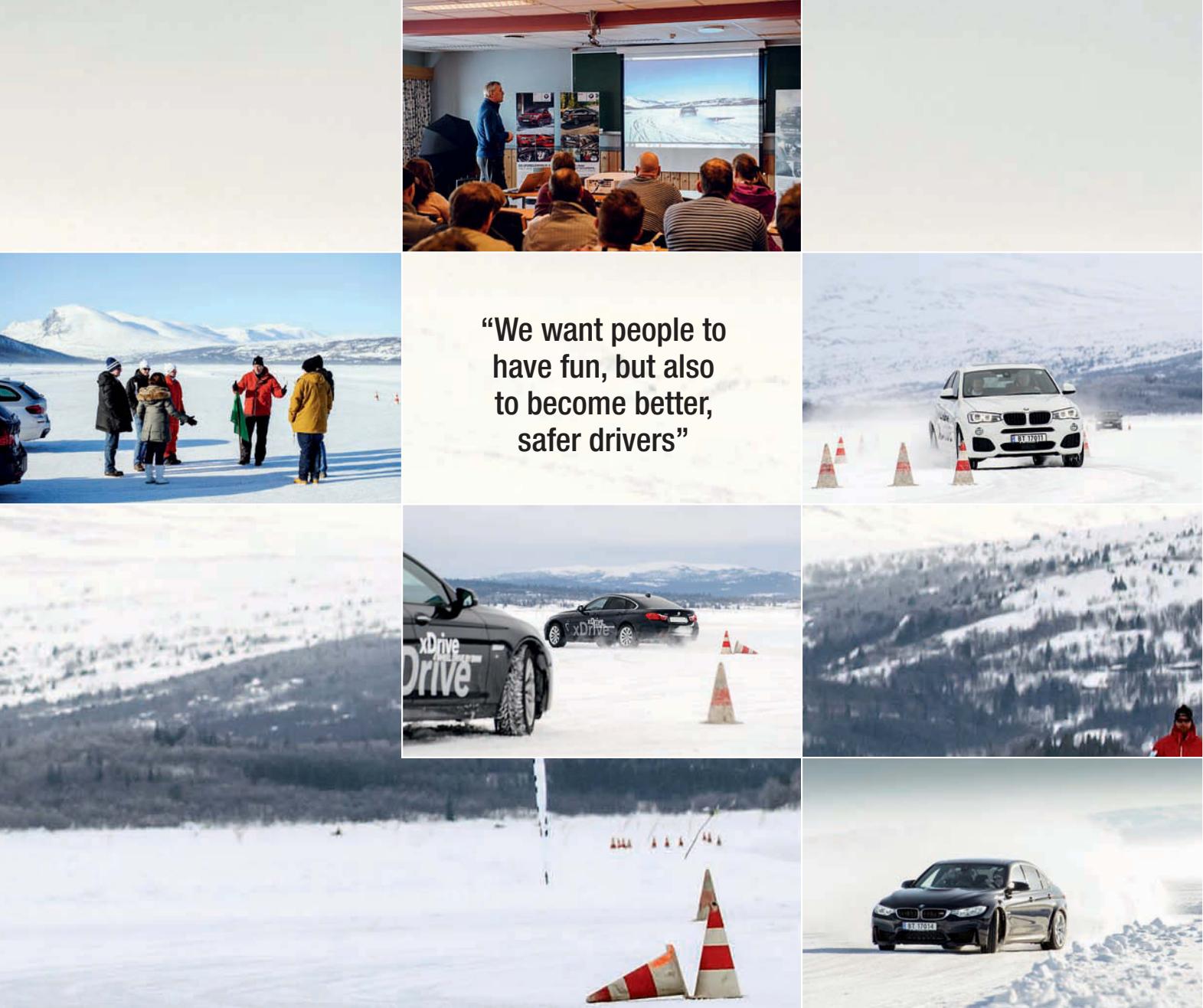
xDrive BMWs and make the short trip a few hundred metres down the road. We assemble at the muster point in the middle of the lake, where thankfully, there are hot drinks on tap, and organise ourselves. At the lodge we'd been split into six groups of six, each cycling through the six activities that lie ahead: Braking, Slalom, S-Curve, Rally, Off-Road and High Speed. We're in Group 4, which means a baptism of fire – we'll start with the Rally activity!

There isn't a better surface to drive a car on than frozen ice. Equip your car of choice with 7mm rally-studded tyres all-round and you're approaching motoring nirvana. The E36 3 Series is a great handling car, and our stripped out 323i is the perfect tool to get to grips with the feel of driving on these

tyres. The available grip is amazing, probably better than summer tyres on a wet track, but they work best with a bit of slip angle and the track layout lends itself well to perfecting the Holy Grail of ice driving in this part of the world – the Scandinavian flick. Taking the opening right-hander foot to the floor with just a bit of opposite lock sets the E36 up perfectly for the left-right-left that follows, a simple lift of the throttle swiftly engages a change of direction each time. It's very satisfying and we all get a good few laps to acclimatise to the experience of the studs digging into the ice. In truth, this was the one I'd been looking forward to the most and it didn't disappoint.

Next up, a complete change as we head back up

to the lodge to try some off-roading. Primarily an exercise designed to demonstrate the performance of the various systems on our X5 and X6 test cars, there was plenty fun to be had in attacking various snow-covered inclines. First, we stop halfway up a hill with the traction control systems switched off and are greeted by various wheels spinning power away as we try to get moving again. In fact, we end up rolling back down the snow-covered incline as the wheels fight for traction. The same exercise with the traction systems switched on sees the X5 gently move away, just the odd slip indicating how little traction there is; it's an impressive display of computers versus physics. We cycle through variations of this before testing the hill descent



system by stopping at the top of a hill and, counter intuitively, keeping our feet well away from the pedals as the systems manage our descent. It feels even stranger to repeat the exercise backwards.

Back to the lake and it's time for a demonstration of what's truly possible on the ice as we're taken for high-speed laps in a current BMW M3 equipped with rally-studded tyres. Our pilot for the day is Swedish Touring Car champion Tommy Rustad, and despite this not being his usual racing surface we're treated to an awesome display of precision and control as the M3 dances from lock-to-lock, passing within inches of marking cones, sideways, at the top of third gear. No matter how good a driver you think you are, sitting next to a professional as they casually

talk you through ice driving at 140km/h (87mph) is a humbling, but great experience.

A welcome hour-long buffet lunch punctuates our day before moving on to the final half of proceedings; we're back to the lake for the braking exercise. Essentially there are two disciplines here; braking from different speeds at the same point and braking from high speeds through a curve. The intent is to provide (very successfully) a stark demonstration of how much braking is affected by speed. After stopping from 40km/h, it's a little scary to see us sail past the same stopping point, having added just 10km/h. Changing speed from 80 to 90km/h sees braking through the cones go from comfortable to right on the edge. I'm staggered at

the braking performance available, but it's eye opening to see how seemingly small speed differentials affect control.

The last two stages demonstrate the effectiveness of the stability and xDrive systems, but also succeed in painting a huge grin on the faces of participants. We start out in a selection MINIs, including a two-wheel drive Cooper S and a four-wheel drive Countryman and Paceman, for the small slalom course, where cones are just a few metres apart. Stability systems are progressively relaxed for each run until we're on our own with the cones in mortal danger as the MINIs swing ever wider until the inevitable spin. Familiarity brings a calmer approach and we're able to zig-zag through the course with a



little tailslide to help direction changes.

This is perfect preparation for the next stage; the S-Curve, which is essentially the same course but considerably faster with cones now 75 metres apart. I try the 5 Series xDrive first and have an absolute blast using the considerable weight to swing one way and then the other before performing (in my mind at least) an elegant pirouette after the last cone. As with the MINIs,

taking a calmer approach gets things nicely under control, and it's possible to get the Five turning with nothing more than gentle throttle manipulation and barely any steering lock. The same exercise in the lighter, manual-equipped 118d xDrive is a blast.

And then we're done; it's nearly 4pm and I wonder where the time has gone – I think there's a saying about that. It's been a thoroughly

enjoyable day on the ice, but the underlying driver improvement message is abundantly clear throughout the event. Many of the exercises have an educational aspect and relay their message by getting you behind the wheel and mimicking real world situations. It also leaves a strong impression of just how capable modern BMWs are when equipped with xDrive; departing in my X4, I certainly feel like a better, safer driver ●



There isn't a better surface to drive a car on than frozen ice



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The Z1 is a pretty rare beast in its own right but the Alpina version, the Roadster Limited Edition, ranks almost as high as the unicorn in the rarity stakes with just 66 examples manufactured

Words: Bob Harper Photography: Dave Smith

Mythical BEAST

There's something about the Z1 that's just utterly mesmerising. As you'd expect we've driven our fair share of them over the years, from BMW UK's heritage car to several belonging to our publisher as well as various modified examples with all manner of engines. And the one thing all these Z1s have had in common has been their ability to drop jaws, set tongues wagging and fingers pointing. And our recent trip out in this delightful Dream black example that's up for sale at 4 Star Classics was no exception.

On a dark and dour day with heavy clouds virtually the same colour as the car threatening to deposit their load on to the freshly polished machine, 'our' Z1 had the desired effect as we dawdled for two miles from 4 Star's HQ to the nearest petrol station with the fuel gauge's needle being brightly illuminated in the diminutive dial by the amber low fuel light. Lorry drivers towering above us swivel their necks to get a second look as we burble past and even the coolest of dudes passing the other way in some sort of Audi with LED lights blazing gives a thumbs up. Yup, the

Z1 exudes a certain type of feel-good factor, but it probably doesn't do to drive one if you are a bit of a shrinking violet.

As if any further proof was required as to the Z1's traffic-stopping ability, our stop for a splash and dash at the first petrol station we come across demonstrates it perfectly. There's a hand car wash situated on the forecourt and a guy is expertly hosing down a car with the high-pressure washer when his gaze turns from the task in hand as the Z1 pulls on to the forecourt. His mind wanders further from car



washing as he witnesses the Z1's driver's door window drop into the door as the door seamlessly drops into the sill and he's only awoken from his Z1 daydream by his colleague who is being soaked by the now forgotten and misdirected pressure washer lance. Highly amusing.

As well as the Z1's door-dropping party piece there's something about the car that's so un-BMW that you almost wonder why the design was given the green light for production. There's no Hofmeister kink (to be fair, there rarely is on a convertible) but

the headlights didn't have the traditional four round units and the kidney grilles didn't exactly look BMW-esque either. These days we have got used to kidneys in all shapes and sizes but back in the late 1980s their design was pretty set in stone and they were *always* chrome. The Z1's body was made out of plastic, it had a separate backbone chassis and the door mirrors jutting out from the A pillars haven't really been replicated either before or since. In short, it was a unique piece of BMW design. Brave and incredibly forward thinking.

While the Z1 was lauded on its arrival for its looks, charm and chassis, the one area where it was criticised was for its comparative lack of grunt. Not that there was anything desperately wrong with the M20 straight-six that had been borrowed from the E30 325i it was just that the chassis felt like it was capable of handling so much more. Where the E30 with its semi-trailing arm rear suspension could feel like a bit of a handful, the Z1 with its multi-link Z-axle (that went on to feature in the E36 3 Series) just felt utterly planted and it didn't take long before Europe's

The Alpina Classic wheels actually feature centre caps individual to each particular build number, in this case 54 of just 66. The build number also features in the centre console plaque, steering wheel and key fob



tuning houses went to work on the car. Perhaps the most successful approach was by Mosselman with its turbo conversion for the car which we drove back in 2009 and in more recent times the car has still attracted attention from the modifiers and we've driven ones with fettled M20s along with M3 six-cylinder power and even one packing an M5's V8.

However, there was only one version made by BMW and more or less the only thing you had to decide when ordering your Z1 was which colour to choose. For a few favoured customers, though, Alpina also made a Z1, and it's that car you can see before you here. Known as the Alpina RLE (with the acronym standing for Roadster Limited Edition) it was one of the rarest of modern day Alpinas with officially just 66 examples being constructed, half of which were destined for export to Japan – a country that's very, very keen on bespoke products from Buchloe.

By the time the Z1 came along in the late 1980s Alpina's set of upgrades for a BMW were pretty well

set in stone and you could bet your bottom dollar that any given BMW would be subjected to a thoroughly comprehensive makeover prior to being signed off by Alpina's boffins and receiving the coveted production plaque. Engines would be hand-built at its Buchloe HQ, the traditional Alpina aerokit would be in place and you'd just know that it had been designed first and foremost with aerodynamics in mind with aesthetics coming in second place. Suspensions would be altered, seemingly offering a much better blend of ride/handling and comfort than you would find in either the contemporary BMW or M car and to set everything off you'd find a set of Alpina Classic alloys shod with tyres that would have been tailored to the car's chassis or vice versa. These were the days of such comprehensively altered machinery as the iconic B10 Bi-Turbo, a car that was lauded for a time as the world's fastest four-door production car.

And with this in mind it hardly seems possible that Alpina's work on the Z1 was so minimal. Part of the

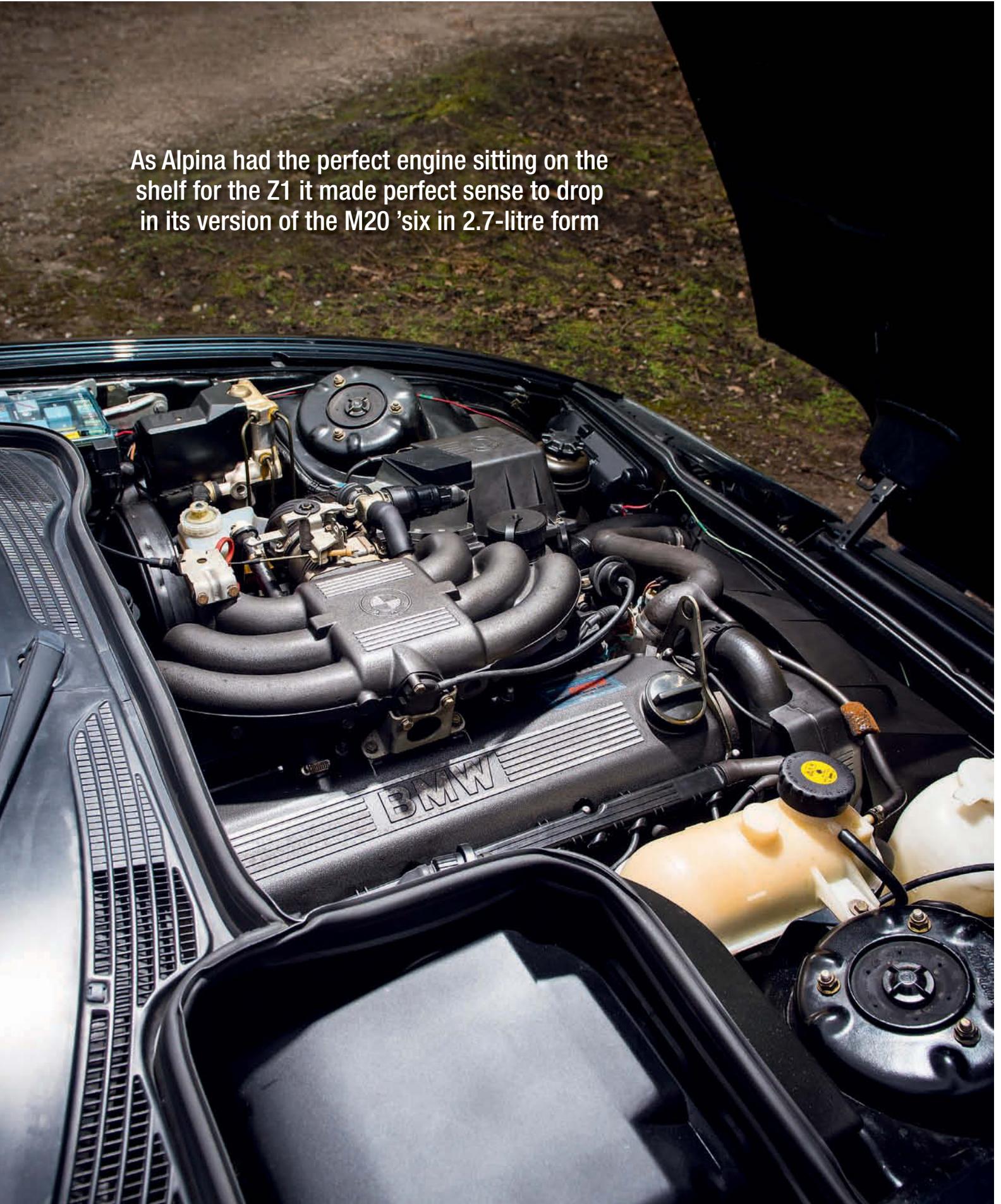
reason for this is that as a pretty bespoke design BMW got it virtually spot on with the Z1 from the outset which left Alpina with less to do when manufacturing the RLE. Alpina traditionally had to give BMWs a bit of a helping hand on the aerodynamic front, especially as with more power they tended to be a fair bit faster than their BMW production counterparts but with the RLE, Alpina wisely decided not to try and improve upon the original design. The low nose, flat floor and very clever rear exhaust box which helped to generate downforce at the rear as air flowed over it ensured that Alpina didn't need to change the car's aerodynamics so it left well alone and instead concentrated on improving the Z1 where it mattered most – the engine.

No doubt there must have been the odd conversation in Buchloe aimed at making the Z1 a real performer but shoehorning one of the company's larger straight-sixes into the engine bay would have severely upset the handling balance and as Alpina



All Japanese specification examples of the Alpina RLE came fitted with these arch extensions in place to cover the larger wheels

As Alpina had the perfect engine sitting on the shelf for the Z1 it made perfect sense to drop in its version of the M20 'six in 2.7-litre form





had the perfect engine sitting on the shelf for the Z1 it made perfect sense to drop in its version of the M20 'six in 2.7-litre form as used in the E30 C2 and B3 2.7. Once the M20 had had its capacity increased to 2651cc and had been fitted with a slightly more aggressive camshaft it was good for up to 204hp in E30 guise although for the Z1 it was rated at 200hp as its exhaust was ever-so-slightly more restricted. To back up the 200hp at 6000rpm there was 193lb ft of torque at 4800rpm and these figures were enough to really raise the Z1's game in the performance stakes with 0-62mph now taking just 7.1 seconds while its 0-100mph time had dropped to 17.8 seconds. That might not be anything to write home about these days but back in its day the standard Z1 could only muster an 8.4 second 0-62mph time and its 0-100 time was a very leisurely 23 seconds. For those who intended trying to hog the outside lane on the Autobahn the RLE's top speed was now 142mph, up from 136mph.

Other changes were exceptionally minimal. The Z1's suspension was deemed to be well suited to the car and rather than installing one of its bespoke setups all Alpina did was to swap the standard front springs for slightly shorter items. Over the years, Alpina had also become famous for its interior upgrades – hip-hugging seats clad in its trademark blue and green striped cloth was a common upgrade in the 1980s, but once again Alpina decided against going wild with the Z1's cockpit, relying on the standard BMW seats and trim instead. There was a bespoke Alpina steering wheel with the company's trademark stitching and in the centre of the steering wheel boss was an Alpina logo with the famous carbs and crankshaft symbols and around the edge it bore the words 'Limited Edition' and the car's production number – in our case 54/66. There's also a production plaque behind the gear lever which eschews the normal black oblong style as this one's more or less square and made of silver metal.



Inside is remarkably untouched for an Alpina with only a few choice additions in place instead of the usual complete retrim with the blue and green stitching we're used to seeing



Alpina RLE

ENGINE: M20 straight-six, 12-valve

CAPACITY: 2651cc

MAX POWER: 200hp @ 6000rpm

MAX TORQUE: 193lb ft @ 4800rpm

WHEELS: 8x17-inch Alpina Classic

TOP SPEED: 142mph

0-62MPH: 7.1 seconds

0-100MPH: 17.8 seconds

WEIGHT: 1250kg

TYRES: 235/40 ZR17 Michelin MXX3

NUMBER MADE: 66



You can hear the sonorous straight-six singing away to itself and the slick five-speed 'box enables you to play a decent set of tunes

The RLE package was finished off with a set of trademark Alpina alloys measuring 8x17-inches, an inch up in diameter from the standard Z1 items and the wheels were shod with 235/45 Michelin MXX3 rubber. In the centre of each wheel was an Alpina logo that mirrored the one on the steering wheel in that they bore the car's production number. This was unique to the RLE with no other Alpina extending the production number to the wheel centres. Even the key fob bore the production number!

That's enough on the history front though, what we want to discover now is what the Z1 is like to drive today. Does the extra oomph offered by Alpina endow the car with enough power to bring the chassis alive? Once we've fuel on board and we've stopped sniggering at the antics of the car wash boys we head off in search of some decent driving roads on the way to our photo location and we're immediately struck by several thoughts. Compared to modern machinery the Z1 really does feel small – it's over 30cm shorter than the current Z4 and it feels narrow too, and compared with a modern machine there's little in the way of space to store your oddments bar a small cubby next to the handbrake.

You feel low and the dark cockpit on this dour day makes it feel claustrophobic with the hood raised. Slow, pockmarked side roads aren't its forte with the ride feeling a little lumper than what we expected.

Eventually we emerge on to some wider, more open A roads and with the rain still being held at bay we decide to pull over and drop the hood to get the full Z1 experience. Entry and egress with the roof in place isn't the easiest of manoeuvres especially if you're an old man with a dodgy back, but once the simple manually folded hood is dropped under its rear deck cover hopping in and out is much easier and the RLE starts to come alive. Driving with the doors down is a bit of a hoot, but you feel really exposed and at anything much above walking pace there's tremendous buffeting from the wind. You're better off raising the doors and windows and driving thus the Z1 feels remarkably snug. You can hear the sonorous straight-six singing away to itself and the slick five-speed 'box enables you to play a decent set of tunes through the bespoke Alpina exhaust. As speeds rise the suspension that seemed a little uncompromising earlier has smoothed out and even in these cold and damp conditions there's plenty of

grip but we don't push too hard partly in deference to the car's value – 4 Star has it up for sale for a fiver shy of £70k!

And that high price might be a stumbling block as far as we're concerned. RLEs hardly ever come up for sale with most of them snuck away in collections so this is around what we'd expect to pay for an Alpina Z1 in good condition, but at this point the car's almost too expensive to be enjoyed unless money really is no object. Wouldn't you be better off buying a 'regular' Z1 for a third of this and actually be able to enjoy driving it, and give other folk the pleasure of seeing one on the road? The Z1 in all its forms is still a mesmerising machine and with the RLE Alpina endowed it with just about enough go to accompany the show, but despite its obvious charms we reckon we'd be more than happy with a standard example even if it might feel a little lacking in oomph when compared to the Alpina ●

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 QUANTUM 44 | S1
18x8 18x9 DEEP CONCAVE
19x8.5 19x9.5 DEEP CONCAVE
20x8.5 20x10 DEEP CONCAVE
MATTE GUNMETAL, SILVER/MACHINED LIP
5x112, 5x120



 QUANTUM 44 | S2
19x8.5 19x9.5 DEEP CONCAVE
MATTE GUNMETAL, SILVER/MACHINED LIP
5x112, 5x120



 QUANTUM 44 | S4
19x9 19x10 DEEP CONCAVE
MATTE SILVER/BRUSHED FACE,
MATTE GUNMETAL, MATTE BRONZE
5x112, 5x120



 QUANTUM 44 | TSI
19x9.5 19x10.5
HYPER SILVER, MATTE BRONZE
5x120, 5x114.3



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SECOND SIGHT

We've sampled the 2 Series Convertible in warm American weather but the acid test is whether the 220d and M235i versions impress on cold UK roads in February – a tough ask for any soft-top

Words: Bob Harper Photography: BMW

M235i & 220d CONVERTIBLES





Not only does the M235i impress with its pace but it also inspires with its soundtrack

Last month we became acquainted with the new 2 Series Convertible for the first time at the car's international launch in America. Today BMW's entry-level cabrio will face a slightly sterner challenge: proving it can cut it in the UK on a chilly winter's morning. We've previously sampled the 228i but today we have the 220d and M235i versions to hand and these machines will be much more relevant to the UK market than the 228i, which will no doubt be a niche seller over here. BMW UK reckons the 220d will take the lion's share of sales – around 35 per cent of buyers will opt for this model – and while the M235i is only projected to garner 10 per cent of sales, in its Coupé form it's currently doubling that figure demonstrating just how popular the pocket rocket is proving to be.

The 2 Series Convertible's predecessor, the 1 Series, was a good seller for BMW, managing to find

over 130,000 owners during its life, with nearly 21,000 of those in the UK. With the 2 Series BMW UK hopes it can add another 3000 or 4000 to that total. The initial line-up will include the 220i and 228i along with the models we have here today and further down the line there will also be a 218i powered by the new three-cylinder petrol unit. Trim levels will be SE, Sport, Luxury and M Sport although the 228i will only be available as an M Sport version, and overall BMW UK expects 60 per cent of all models to be spec'd with this package.

The M235i is, of course, an M Performance model and it's the one we decide to sample first. Despite the pictures showing a vehicle with a manual transmission we actually elected to sample the eight-speed auto on this BMW UK launch as we've already spent plenty of time using the manual 'box on our sorely missed M235i *Longtermer*. There's no getting away from the fact that the 2 Series Convertible is a

pretty attractive piece of kit, and in M235i guise there's enough extra muscle in the aero kit to make it look like it means business. And with the Twin Power turbo 3.0-litre 'six under the bonnet it certainly has enough firepower to match the looks. There's 326hp on tap between 5800 and 6000rpm and that's backed up with a meaty torque curve offering 332lb ft from 1300 to 4500rpm.

Despite having gained quite a bit of girth over its Coupé counterpart (the Convertible weighs 145kg more than the Coupé) it's still a very, very fast car with BMW quoting a 5.0-second 0-62mph time for the eight-speed auto and 5.2 seconds for the manual, and out on the road it certainly feels this rapid. The 2979cc blown 'six really is a peach and unlike some other BMW turbo engines it's happy to rev past its peak power point staying creamy smooth and decidedly tuneful as you do it, too.

We'll come onto the car's handling in a minute but



to start with it's a case of sampling the car with the hood up as that's probably more important if you drive a convertible in the UK than how the car performs when it's down. If there was one main area where the old 1 Series soft-top fell down it was in terms of refinement. As a result BMW has increased the insulation on the hood and used materials with improved sound deadening qualities which, along with a reprofiled rear side window surround, has led to a drop in interior decibel levels. Well, that's the theory and we'd have to say that once out on the road the car does feel well-insulated from the chilly, blustery morning. There's no need to raise your voice to hold a conversation at highish cruising speeds and, bar the poor rear three-quarter vision that almost inevitably comes with this type of soft-top, it's as pleasant a place to spend time as in the Coupé.

Despite the low temperatures it's a gloriously sunny winter's morning so we elect to drop the hood

down to see if we can make the most of the conditions in the 2 Series. Lowering the hood is a doddle – simply hold the switch down and the electrics do the rest in a scant 20 seconds. This can be done at speeds up to 30mph so it's perfect for when trickling along in traffic. Once we're exposed to the elements we need to boost the heater, switch on the heated seats and raise the wind deflector; it does seem a little mean that you need to shell out for both these items as cost options – they're almost obligatory for a Convertible and should really be standard fitments. Still once we're nice and cosy it gives us a chance to sample the performance on some decent stretches of Tarmac. Not only does the M235i impress with its pace but it also inspires with its soundtrack – dropping the hood really does allow you to properly hear the straight-six.

When it comes to the twisty bits the M235i Convertible is pretty convincing, too. It's not quite as

sharp as the Coupé but it's not exactly a blunt instrument either. It turns-in well and grips hard and ultimately any (very small) dynamic shortcomings when compared to the Coupé really can simply be put down to the extra weight it's carrying. Structurally it feels very solid – it's a long way off an E30 or even an E36 3 Series Convertible and BMW reckons that the car's torsional rigidity has been improved a further 20 per cent over the old 1 Series Convertible.

At £37,710 for the manual (or £39,255 for the Sport auto we've driven) the M235i is not what you'd consider cheap but to get anywhere near the same level of performance from the Audi line-up you'll spend the same amount of money on an S3 Cabrio, only get four-cylinders and 300hp, and won't accelerate so fast. From the BMW stable you could get almost the same performance from a 435i M Sport Convertible but it won't be as much fun and you'll need to pay £8500 extra for the privilege, too.



There's still a soft-top roof rather than the metal folding type found on the 4 Series. It's been engineered to reduce wind noise further this time and it seems to have worked. Visibility is still a little restricted though

F23 220d & M235i Convertible

220d	M235i
ENGINE: Four-cylinder, diesel, turbo	Six-cylinder, petrol, turbo
CAPACITY: 1995cc	2979cc
MAX POWER: 190hp @ 4000rpm	326hp @ 5800-6000rpm
MAX TORQUE: 295lb ft @ 1750-2500rpm	332lb ft @ 1300-4500rpm
0-62MPH: 7.5 seconds (7.4)	5.2 seconds (5.0)
TOP SPEED: 140mph (140)	155mph (155)
ECONOMY: 60.1mpg (64.2)	33.2mpg (35.8)
EMISSIONS CO₂: 124g/km (116)	199g/km (184)
WEIGHT (EU): 1610kg (1630)	1675kg (1695)
PRICE (OTR): £29,965	£37,710

Figures in brackets refer to eight-speed auto

With the roof down the M235i version with its aero kit looks rather smart. It also means you can hear the engine and exhaust note better



Our second test car, though, has a far more palatable price tag – in Sport guise the 220d Convertible weighs in at £29,965 – and while not as overtly rapid as the M235i it still boasts a pretty decent set of vital statistics. It's equipped with the new B47 1995cc diesel that offers 190hp and 295lb ft of torque and promises a 0-62mph time of 7.5 seconds, a 140mph top speed and, according to the EU test figures, is capable of 60.1mpg in the manual guise we have here. Without the benefit of the M aerokit that adorns the M235i it doesn't look quite so sweet but it's still a pretty thing to look at and it's also worth pointing out that thanks to the soft-top design (as opposed to the 4 Series' folding hard-top setup) it's a practical proposition, too. It's bigger than the old 1 Series (72mm longer and 26mm wider) and with a wider track front and rear it also appears more muscular. 30mm of that extra length is in the wheelbase so rear passenger room is improved,

although an adult will still struggle somewhat to fit behind a six-foot driver. Boot space is improved, too – 280 litres with the hood down and 335 litres with it raised makes it pretty much the class leader and with a through-loading system on the options list fitting golf clubs and the like into the car shouldn't be a problem at all.

Once we're under way with the hood in the 220d the refinement the B47 four-pot has brought to the car is immediately apparent. It's a much quieter unit than the old engine yet is still punchy and economical. Our route on the return leg of the launch takes us along plenty of fast dual carriageways and motorways and with the hood stowed it becomes apparent that any speed over 80mph will have you raising your voice to speak to your passenger but even at these speeds the cockpit remains pretty warm and snug.

Once off the motorway we were surprised to find

the 220d executing rev-matching downchanges of its own accord on the back roads and this is something that will be spreading across the range for cars with manual transmissions in the coming months. It's very clever and does make a ham-fisted driver look like they can drive very smoothly, although die-hard manual drivers would probably still prefer to do it themselves. That apart, the 220d is a very accomplished machine recording just over 45mpg on our drive, which was pretty creditable given we were using most of the car's performance.

Overall you'd say it was a job very well done on the 2 Series Convertible. To our eyes it looks pretty, performs well and, unless you're really going for it, you won't notice any particular shortcomings from the lack of a roof. And if the 220d and M235i can impress on a cold winter's morning we reckon they'll be hugely entertaining when the weather warms up. Roll on summer ●



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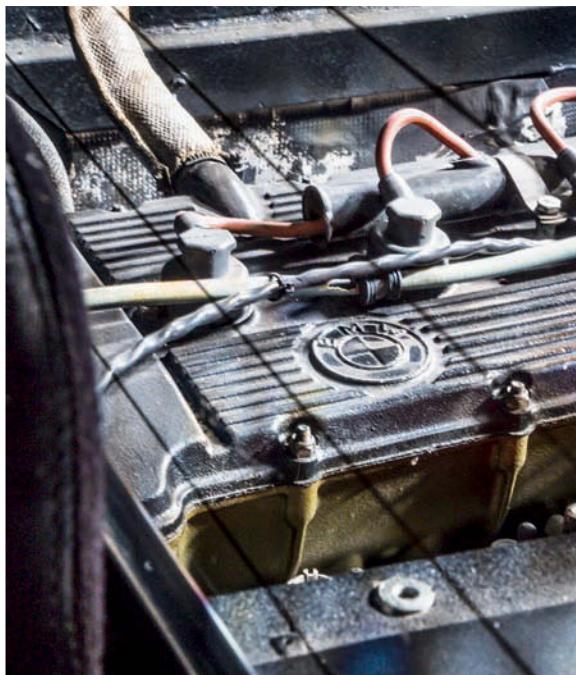


Racer for the Road

BMW's M1 was a stunning road car and in its ProCar form was a pretty dramatic race car, too. German tuner AHG decided to combine the best of both worlds and created ten stunning bespoke M1s for the road

Words: Bob Harper Photography: Andrew Tipping







Despite having British parents my wife and her siblings (there are six in total) were all born in Peru and my wife lived there for the first ten years of her life. Naturally enough they were all pretty fluent in Spanish with the odd phrase of the indigenous Quechua language thrown in for good measure. While the majority of them have forgotten most of the language they spoke as kids there are a few phrases that still get bandied about when they all get together these days. Most of these words seem to centre around food but there's one in particular that has always fascinated me: *'huachafa'*.

It took me quite a while to work out what they were going on about and I still haven't really mastered the perfect translation, although 'naff' comes pretty close. It's generally aimed at someone with more money than sense, someone who's a little nouveau riche and has yet to develop a proper sense of style to go with the accompanying cash. If you had ventured to the Geneva Motor Show this week you'd have seen plenty of machines from some styling houses (that I won't name here for fear of being sued) daubed in dubious paint finishes or wraps, slathered in carbon and wearing quite ridiculously large wheels and bearing equally ridiculous price tags. These machines would have all have fallen into the *'huachafa'* category.

You could argue that this makes me sound like a frightful snob but to my mind there are some things in life that simply shouldn't be messed with. Those items that appear to be so intrinsically right from the get-go that trying to improve upon them is a massive folly. Friends at school used to lust after Koenig 512BBs but I just couldn't stand the wide-bodied bespoiled monsters, preferring the delicacy and purity of the car's original form. These days I've mellowed my views somewhat and machinery such as Koenig Ferraris do exude a certain period charm, a reminder of some of the excesses of the 1970s and 1980s; who knows, perhaps some of those machines in Geneva that I've just vilified will one day be looked upon just as kindly?

But if we turn to the matter in hand, this AHG modified M1, I'm not entirely sure what I would have

made of it back in the day. I'd probably have lumped it in the same category as the Koenig as the notion that anyone was actually going to be able to successfully modify Giugiaro's strikingly simple lines of the M1 was utter heresy. But that would have been doing the car an injustice as there's actually quite a lot to like about the AHG M1 and it does now have bags of period charm going for it. But before we go any further we should have a very quick recap on the M1 itself.

Designed from the get-go to be a racing car that would be able to take on, and beat, Porsche in Group 4 racing the M1's long gestation period and protracted and complicated production cycle meant that by the time the car was ready the rules had changed and the car wasn't able to compete competitively. This wasn't really BMW's fault, although you could argue that BMW Motorsport shouldn't really have put so much trust in Lamborghini's ability to manufacture the car in the first place. Eventually, though, cars did slowly begin to trickle down the 'production line'. The fibreglass bodies were joined to the tubular space frame chassis by Ital Design in Turin before being transported to Baur in Stuttgart who installed the engines and running gear (supplied by BMW) before the cars then returned to Munich for the final finishing and sign-off. Given this complicated process there was no way BMW could produce the 400 road-going examples to homologate the car for racing in the required time and as a result the ProCar Series was born. For two years this was a glorious support series to the F1 circus and had F1 drivers pitting their skills against racers from other disciplines – have a look for some of the period footage on YouTube – it was quite a sight (and sound!).

Sadly the ProCar series ran for just two years – 1979 and 1980 – and the production cars continued to trickle their way to market until the middle of 1981. At the time there were plenty of small BMW tuning companies out there, some of them based in BMW dealerships, and one such dealer was AHG in Bielefeld in the north of Germany between Hanover and Dortmund. It had a proactive MD, Peter Gartemann, and it was his idea to do something a little special with the M1. The company already had a



**“With the AHG engine upgrade this M1
moves the way you’d expect a
'70s supercar should”**



decent sideline going tuning the E30 3 Series, E28 Five, E23 7 Series and the E24 Six. We're not talking about just adding a set of spoilers and wheels here, the company offered engine conversions and suspension upgrades, too.

Gartemann wanted to produce an M1 that was closer to the ProCar than the production car but wanted it to still be usable on the road. The result is the machine you can see before you. It would appear that the original idea was to simply install modified ProCar spoilers while retaining the road car's interior but pretty soon it became apparent that fitting the racing aerodynamic parts was going to be a bit of a nightmare if AHG wasn't going to fall foul of the strict German TÜV authorities which would mean its modified machinery would not be legal for the road. The main problem was that the rear spoiler was going

to fall foul of what was permitted and in the end AHG had to resort to designing a new rear spoiler made from a softer material. The front spoiler was redesigned with ducting for the brakes and the three centimetre wider sill extensions blended in well with the new front end design. As well as the extended body styling Gartemann wanted his M1s to stand out from the crowd, so once the bodies were completed they were sent to the artist Hermann Altmiks for the distinctive paintwork.

In an article in a 1982 edition of German magazine *Sport Fahrer* the impression was given that Gartemann thought that the standard car's performance would be more than adequate, and whether he had a rethink or his customers decided that the car needed more go to match the show isn't known but he did subsequently offer some

performance upgrades for the car, which we'll come onto in a moment.

This particular machine that's for sale at Canepa in the US is number 94 of the 454 M1s that were produced and actually started its life as a spare body for a ProCar. It was subsequently assembled as a series production car and sold by BMW AG Niederlassung to its first owner from Mainz in November 1979. It then changed hands in late 1981 and was then owned by an artist who used the car to display his designs and it was featured at shows and in contemporary newspapers.

It wasn't until 1983 that the M1 was delivered to AHG ready to be transformed. As well as the special aerodynamic package it was treated to the Hermann Altmiks paint scheme and then underwent a series of mechanical upgrades, too. The most significant of



AHG wanted to endow the M1 with some extra visual drama. The result was a ProCar-inspired set of modifications to the front spoiler, sills and the fitment of a rear wing



AHG offered plenty of upgrades for the interior of the M1 but this particular car only had a partial retrim with the seat centres and door trim panels being changed



these was an engine rebuild to 350hp spec and this was mated to a sintered clutch and a freer-flowing exhaust system. It sits on a custom suspension setup and is finished off with a set of period BBS alloys.

As each AHG machine was built to its owner's instructions there were plenty of different interior treatments available. In this particular machine the houndstooth cloth seat centres and door trim panels have been retrimmed in Alcantara and this also features on the dash pod, too. Presumably some owners wanted to go further than this as, truth be told, the standard M1's interior was more functional than opulent and AHG's price list of the day has plenty of 'price on request' categories for special leather finishes and the installation of more powerful speakers for the stereo.

This machine was only very lightly used after its conversion, covering less than 750 miles, before being imported into the US in the mid-1980s. Getting the M1 through strict US regulations was tough but

once done the car was often seen on the BMW show scene before it entered long-term storage. It emerged from storage in 2012 before being given a thorough recommissioning, so it's done less than 5000 miles since it was converted by AHG over 30 years ago!

As you can see from the images, we weren't able to drive the car but we spoke to Canepa's marketing director, John Ficarra, about it and he was very enthusiastic about the AHG machine. "The car drives great. M1s are beautifully balanced cars but in my opinion they have always been woefully underpowered. With the AHG engine upgrade this M1 moves the way you'd expect a '70s supercar should, and the sound of that normally aspirated BMW straight-six through a racing exhaust is sweet, sweet music."

Having experienced the aural delight of a standard M1 and watched plenty of M1 ProCar videos we can only say that John is a very lucky man indeed to have sampled this car.

Ultimately this really is a car of its time. If you proposed doing this to an M1 today you'd probably be shot by the BMW community but it's a real throwback to a time when a few discerning owners wanted something a little different from a contemporary Ferrari or Lamborghini. How the car would have been seen back when it was transformed in the 1980s I'm not quite sure, but I'm almost certain it would have divided opinion between those who thought Koenig Ferraris were the last word in style and those who thought they were a byword for nouveau riche naffness. Today I think it's a brilliant period piece and dream purchase for someone after an '80s icon with added ProCar-style aggression. *Huachafa?* Not a bit of it ●

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Lap of Luxury

Back in the day the E38 750i was right at the cutting edge of technology but how well has it lasted the test of time? Mark Williams finds a superb shortwheelbase example to find out

Photography: Mark Williams/Lullingstone Cars

Back in the days when I was obsessed with Mercedes, a word I would often hear was 'youngtimers'. A youngster car would always be at least one generation removed from the contemporary models, probably already been through one or two owners and had lost that new car, latest thing appeal. And yet it would be parked very carefully, with the wheels devoid of careless curbing and equipped with expensive (i.e. correct) tyres. The paintwork would have a lustrous shine and the little details like window and 'screen surrounds demonstrated the owner's care and attention. Fast forward a few years and we're talking about cars which were too old to be considered as daily propositions, yet too young to be classics, whilst at the same time having successfully managed to avoid the crusher's claws or those awful government-funded scrappage schemes.

It was (and indeed, still is) a byword for growing old gracefully. These are well-cared for cars in the homes of owners with the necessary open minds to maintain them to the appropriate degree, whilst not being overly concerned at the otherwise depressing decline in their value, nor with following fashion. This is the natural selection process which, in BMW land, eventually distilled the E30 M3, E34 M5 and E39 M5 production runs down into a concentrated group of survivors, whereupon economics will not be denied and these victors then start to creep up in value. It's happened already with the M3, those in the know tell

me it's now starting with the E39 M5 although bizarrely (a last example with a six-pot, hand-built and an analogue driving experience) it's yet to really kick off with the E34. It will though, I'm sure of that. As the years pass, one starts to realise these cars stand as footnotes in history, and reverence inevitably follows.

However, even though BMW's rich and dominant history over the last 30 or so years is littered with machinery capable of creating youngster status, I've never really seen or heard the phrase associated with their products. And this is strange because for every model Mercedes has offered up in that timeline, BMW has an equally compelling riposte, something quietly confident and beautifully engineered like an E34 535i Sport or more brutish and blunt like an E31 850 CSi. Laid back luxury more your thing? Then at some point in the past you've either owned or fancied having a 140 Series S-Class Mercedes. Slab-sided, two-tonne-plus leviathans with so much room you loll around, have a get-out-of-my-way road presence and an armageddon-survivable build quality (decomposing wiring loom aside). And if you believe in doing things properly, you've probably hankered after the V12, given once they pass a certain age they're worth less than a cauliflower. Wait a moment though, during the same period BMW produced something equally tasty and V12 powered, right? Understated, quite often eclipsed behind the mega-Merc's footprint and horsepower figures (it's always been my belief that the German horsepower

race started with these two), but piloted by a driver who seemed to be just that tad cooler, more engaged with the process and ultimately, having a better time. The E38 Seven Series is a youngster candidate and no mistake.

BMW stuck to evolution and not revolution in its unveiling of the E38 generation 7 Series in 1994 (from a design perspective anyway, electronically it contained more computing power than it took to put man on the moon and represented a massive leap forward, but we'll come to that later). A little too conservative for some, elegant, understated and quietly stylish to others, the shape has aged with a timeless grace which (in my opinion) the E65/66 generation which succeeded it will struggle to emulate. Vindication perhaps of BMW's decision at the time to not mess with the formula which proved so successful with the E32? Think of today's F01/02 and consider this; as a design statement, is it an evolution of the E38 or E65? To this day the E38 is a design which endures, even portraying a certain roguish appeal and informing BMW's current design language amongst its saloon output. Ideally proportioned on 18s, but still appealing to the eye on comfort-orientated 16-inch wheels, it just works.

Inside it's much the same story. I've owned three of these, and in each I would invariably adopt a laid-back, quietly contented driving position, sunk low into the comfort or sports-contoured seats, admiring the layout and architecture of the dashboard and interior



design. The sweep of the burr walnut on the passenger side, the 'come sit here' look to the front seats, all snuggly bolstered and with their upper portion angled just so to support one's upper back. Then your eyes fall to the palm-shaped gear lever before a glance in the rear reveals chairs which seem to envelope their occupants, complete with headrests apparently melted over the tops of the seat backs. I don't honestly think BMW has produced such a intrinsically correct interior since the E38, although the E39 is a possible exception, sharing as it does so much of the same flavour (not to mention the electronics, but we'll come back to that). The E65/66 was too cold, and the F01/02, whilst clearly a product of the same line of thinking, seems to have lost the welcoming ambience somewhere along the line.

Or is all this just a bad case of rose tinted spectacles? After all, the examples I had weren't exactly paragons of reliability and they're long gone now. How have these things actually aged? A chat with old friend Ian Lockwood at Lullingstone Cars (www.lullingstonecars.co.uk – erstwhile Ultimate7 and before that Oakriver Cars) offered up the opportunity to find out. Where he once would deal in E38s almost weekly, today Ian tends to deal in more contemporary BMWs (X5s and the like) as the old Sevens are proving hard to source in the required condition which makes them worthwhile retail candidates. But they do crop up occasionally, and the arrival of W52 GYW (now sold), an excellent condition 2000 model year SWB 750i for £6k afforded me the opportunity to wind back the years and dial back into the appeal.

It's dry and clear, but damn cold on the agreed date and as I arrive at Ian's premises not far from Swanley, I draw up alongside the freshly polished and prepped Seven. I'm again under time constraints so after a quick hello, I climb aboard the idling 750i and head off down the drive. Already I'm spotting the narrow diameter to the steering wheel rim and smiling quietly as the layered-in-leather interior creaks

and groans to itself. It seems wide, too. The lanes down here are pretty narrow, and today they're occupied by a thousand cyclists too, so these factors combined with my relative unfamiliarity makes those few moments a bit fraught.

We're soon on to faster and flowing roads though, and the 5.4 litre M73 V12 starts to make its presence felt, both aurally and physically. Muscular low down, but tending to sound a bit strained higher up, it seldom needs to be revved beyond 4k and between idle and this useable ceiling it offers up a quietly enveloping soundtrack and respectable if not earth-shattering acceleration. Its natural gait is seven tenths, working seamlessly with the five-speed auto to ensure you cover the ground with minimal fuss. A mournful moan from up front signals a big hearted assault on the horizon and whilst a moderately well-driven Golf GTI will soon disappear into the future,

needed to slow this thing from speed. It's no surprise that these days there is talk of harvesting the heat caused by braking.

Tip the nose into the corner and in this age of active dampers the amount of lean on display will be a tad disconcerting at first. It's not untidy, but you're aware of the suspension working to keep the whole caboodle aiming towards the apex one way or another. And it lets you hear it working, too. Although that's forgiveable given the 88k miles this example had covered at the time of the test.

Back in period, the E38 always seemed a more incisive drive than the 140 Series Mercs, and that still holds true today. The latter isn't a bad steer per se, but its sheer mass discourages this kind of driving, as capable as it is. A motor this big occupies a lot of road when travelling sideways. In the BMW though, one is aware of the slightly reduced mass and it's this,

You simply cannot beat a torque-rich V12 pouring its power into the transmission

you simply cannot beat a torque-rich V12 pouring its power into the transmission and feeling that elasticity contained before it shoves you up the road. Provided you can stomach the fuel bills of course, more of which in a moment.

When the corners arrive, and as they often do around here, the brakes slow the car with that notable effort-to-effect multiplication ratio which will be familiar to anybody who has driven an older Bentley. One presses down on the pedal to what is thought a suitable degree, and the car responds by standing on its nose as a dinner plate-sized servo takes your input and ramps it up to what is actually

coupled to the lower and more intimate driving position and allied to BMW's own particular take on chassis dynamics which swings the balance in the BMW's favour if you have even the remotest interest in vehicle dynamics.

A left click of the auto lever engages sports mode, which is mostly ill-advised as it kicks the 'box down a gear or two. This in turn sends the revs soaring and the V12's exertions can now be fully heard – not always a good thing. Best to use kickdown in order to get up ahead of steam then lift in order to prompt the 'box into changing up. It's a little like asking your grandmother to do a sports day; you can ultimately





ask the question, but the answer isn't necessarily what you expect to hear. Plus plenty of fluids are required to maintain this kind of behaviour. In the M73's case, it will already be happily dispensing a gallon of unleaded every 20 miles or so at best, maybe a tiny percentage more on a run, but a damn sight worse around town, so it's perhaps best to not encourage it. Still, as I think I've said before, V12 owners don't lie awake at night sweating over the price of a barrel of crude and besides, it's relatively cheap these days... We recorded 18mpg on test and given the country roads and total absence of open country, I was quite pleased with that.

In terms of equipment, accepting the fact that radar-guided this and that, night vision, blind-spot monitoring, reversing cameras and head-up displays etc are very much a modern phenomenon, you don't really want for much inside an E38. Later models benefit from a wide-screen nav display, but even so the combination of leather and inlaid walnut, allied to electric everything, blinds in the rear, soft-touch headlining, double-glazing and heated seats do make you feel good about life. Then you notice that this example has a powered bootlid (which I've never seen on an E38), plus powered rear seats (rare on the short wheel base models) and you start to think 'crikey that's a lot to go wrong' or 'nice touch'

depending upon your disposition.

Even though modern BMWs don't seem as well made as the older ones were (or at least, comparatively speaking, as well built as today's used examples did in period) they are at least new and ergo, less likely to go wrong. Alas that is not something we can say about the E38 and if you are looking for one, best pay attention. Here comes the sobering bit...

If you intend on owning the car for any significant period, odds are you will need to change the radiator, which always tend to split at the top hose. Modern replacements are better made, but still not immune. The V8s suffer from the usual array of oil leaks but the 12s are actually pretty solid, so long as you keep the servicing up to date. The intake cyclones can split (due to rubbish plastic which dries out with age) causing a hunting idle but otherwise, and partly due to the chain-driven valve gear, these old engines are pretty sturdy.

Alas the rest of the E38 isn't ageing as well and the three I had suffered from the following at some point (although none of them were afflicted with all)...

The charcoal filter for the fuel tank gets clogged up and requires replacement, as soon as possible really because it will only accelerate the wear of the metal fuel tank (if still fitted, although by this point most of

them should have been replaced with the later plastic item). They fail to vent properly as the filter loses its ability to breathe, the whole tank gets sucked in, metal fatigue results and hairline cracks start to appear in the centre of the tank. And be careful how you put the new tank in; always make sure you fit new seals to the sender pump fitted to one side (which is responsible for picking up fuel and sending it over to the other side of the tank as you fill up, as on the 750s there is one main tank split into two sections either side of the diff) otherwise you will have fuel spilling out over the top of the tank when you fill it up. With hot exhausts close by, this clearly isn't good.

If you're still not dissuaded then you'll also have the prospect of ruinously expensive wiper mechanisms to deal with if they ever do pack up (they were rumoured to be £2k from BMW years ago, but of course much cheaper options now exist and there's always eBay), door handles which come off in your hand as metal fatigue sets in here, too, plus rust in the usual BMW E3x hot spots such as bootlids and fuel filler areas. And we can't talk about E38 reliability without mention of the infamous wheel wobble (which, bizarrely, the test car didn't suffer from at all). This sets the steering wheel off ever so slightly at around 45mph but then goes a short while later. You

can pull your hair out worrying about this, and I'd almost recommend just living with it once you've changed the pads, discs and bushes and been advised that the suspension is pretty solid.

Oh, and the electrics too of course. Which aren't actually that bad in all honesty, except for the maddening rear light clusters, whose bulbs respond to electrical impulses across the whole board in which they're located, as opposed to individual wiring, but whom seldom sit in their apertures with anything remotely approaching a good connection. Eventually, 'check brake light' will appear in the instrument cluster (assuming you've paid the inevitable £150 or so to one of the firms who are now – mercifully – able to repair the straps within the cluster which fail and take all the pixels with them) and you'll duly go and buy a new bulb. Fitting that results in a good connection for a day or so, then the message reappears and the reality begins to set in...

Other electrical gremlins are the sat-nav monitor, which can suffer from failed pixels leading to vertical green lines and a particular favourite, the two batteries on 750 E38s. Many head-scratching evenings were spent at various BMW specialists with my E38s, using hidden menus in the dashboard (check it on Google) to locate the voltage reading



Today's plastic-clad powerplants really can't compete with the M73's installation



and ascertain whether the batteries were kaput or there was a drain somewhere...

If all this sounds like I've got a downer on the E38 then that's not the case. They're fantastic machines to drive and own but ultimately, caveat emptor reigns. One needs to go into E38 ownership with eyes and wallet open. Buy a good one like W52 seemed to be and you'll hopefully only experience a few of the above. But buy without due diligence and you'll pay for it dearly.

Back at Ian's base I marvel at the underbonnet packaging and mourn the loss of good engine bay visuals. Today's plastic-clad powerplants really can't compete with the M73's installation; all intake plenums and trunking. It's a marvellous sight. And I simply love the turbine startup on these things, plus the fact that the whole car gently rocks on its springs as it fires up.

It's worn the years well the E38, and this particular example even more so. The product of several careful and loving owners, who both understand what the car is and how it should be maintained, it's a survivor and a real youngtimer. Hopefully it will continue to enjoy careful maintenance consummate to its mileage and condition now it's being enjoyed by its new owner. You can see more of this Seven at my QuentlyBentin YouTube channel and Lullingstone Cars will have more for sale at some point if you see the appeal. I wouldn't blame you for taking one on, despite their flaws ●

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E92 M3

If you're looking for performance, driver involvement and practicality all wrapped up in a reliable package, then you really need to look no further than the E9x generation of M3. It's a brilliant used buy

Words: Bob Harper Photography: BMW

So this is it. The last of the great line of naturally aspirated M cars, and unless some scientist discovers irrefutable proof that CO₂ and hydrocarbons are good for you and actually slow the rate of global warming its ilk will never be seen again. It's all about the turbocharger these days and it won't be long before wringing the neck of a glorious NA V8 such as the one under the E9x M3's bonnet will just be a distant memory. Time to enjoy one now before it's too late. And the good news is that unless you're doing mega mileage, running an E9x M3 really shouldn't break the bank. They're generally reliable and surprisingly practical too and as there's the option of the four-door E90 version you should be able to come up with a pretty good case of man-maths as to why it'd be perfect family transport.

As most will know, the generations of M3 that proceeded this machine were powered by four- (E30) or six-cylinder (E36, E46) engines and that makes the E9x M3 unique in that it's the only non-turbocharged V8 M car BMW has ever made. The S65 V8 is the heart and soul of the car and to chase down the redline on one of your favourite stretches of Tarmac borders on automotive nirvana and something that any petrolhead should definitely put on their hit list. It's not perfect – monumental thirst when driven hard being its main bugbear – but it's a small price to pay for the performance that's on offer and the way in which it's delivered.

The V8 was around 15kg lighter than the E46 M3's S54 straight-six, despite the increase in capacity and the addition of two cylinders. Revving to a heady 8400rpm, the S65 V8 develops 420hp at 8300rpm along with 295lb ft of torque, produced at 3900rpm though 85 per cent of this is spread across a 6500rpm rev range, making it feel far more muscular than the figures would have you believe. The M3 was blisteringly fast – covering the 0-62 sprint in a scant 4.8 seconds, just two fractions off the E63 M6's time which was the fastest accelerating M car up until that point. Top speed was limited to 155mph as per usual, but let off the leash the E9x M3 would happily run to 180mph and possibly even beyond.

Externally the E92 M3 gained the sort of pumped-up stance you'd expect from an M car without appearing too overblown and the result is the perfect

blend of style and aggression. The front bumper features three large air intakes to feed the engine and radiators with as much cooling air as possible, hence the lack of foglights as is now commonplace on M cars. The bonnet has an almost comically large power bulge but this was a necessity to accommodate the V8 – when viewed in profile with the bonnet open, the engine clearly juts out above the wings. The right-hand vent next to the bulge is a dummy, merely existing to mirror its partner for aesthetic purposes, but the left-hand vent acts as a secondary feed for the air intake and the V8 needs it because at maximum revs it ingests 400 litres of air every second. The arches are lightly flared all-round and the front wings house functioning cooling vents while the aerodynamic mirrors were wind tunnel tested in order to reduce drag. Viewed in profile, those sculpted skirts give the car a more muscular look while the shapely rear bumper features a central diffuser with the meaty quad pipes poking out from beneath it while the sliver of a rear spoiler helps to reduce rear axle lift.

BMW M worked hard to try and keep the M3's weight down as low as possible although at 1655kg (when measured to the EU standard) it's not exactly what you'd call a featherweight, but part of the brilliance of the car is the way it manages to hide this bulk when on the move. Weight-saving measures included a carbon roof, which not only helped to reduce weight but also lowered the car's centre of gravity, and beneath the surface you'll find all-aluminium front and rear suspension and compound brake discs. The suspension features ally spring struts at the front with swivel bearings, a central subframe and additional thrust plate with increased stiffness and cross-wise stability for the whole frontal section. The rear suspension features an all-new construction, with the exception of one single track control arm, and the use of forged aluminium, in conjunction with aluminium dampers, helps to reduce rear suspension weight by 2.5kg. Even the anti-roll bars are weight optimised and the suspension geometry, which featured two additional longitudinal bars, was revised to make the M3 an even sharper tool. Electronic Damper Control (EDC), with three settings for suspension stiffness, was available as an option. Dark graphite 18-inch wheels were standard, shod with special 245/40 and 265/40 Michelin Pilot Sport tyres



that were designed specifically for the M3, while 19s were available as an option (and most were spec'd with these) and they also came with Michelin Pilot Sport tyres designed specifically for the car.

The M3 did face criticism for not having the sort of interior that went hand-in-hand with a £50k car, and while it might be a little plain for some tastes it's generally well put together and has plenty of kit, both as standard fitments and as options. The seats not only look good, with their embossed M logos in the headrests, but they are extremely comfortable too, and offer exceptional levels of support across your whole body thanks to the large bolsters. The chunky steering wheel is unique to the M3 and as well as the usual controls features an M button, and the functions attached to this can be set up via iDrive, allowing you to configure the throttle, steering, suspension (with EDC present) and DSC settings to your liking and store them to the M button, letting you employ your ideal setup at the push of a button. The speeds and rev counter are also M3-specific items, the latter featuring variable warning zones to let you know when it's safe to give the engine its head. The gear lever is also different than in other E9x models – it's actually quite tall, much taller than the perforated M Sport item, and the leather covers the knob and the lever itself in one single piece.

The M3 came well spec'd as standard, with leather, cruise control, xenons, rear PDC, air-con, Professional sat nav, anthracite headlining and an auto dimming rear view mirror among the usual array of equipment. The range of options was even more impressive: aside from EDC and 19s you could have adaptive

headlights, heated seats, Comfort Access, a Climate Comfort windscreen, Bluetooth, Individual High End audio, voice control and a TV function among others. The range of exterior colours was a bit staid with two solid colours and seven metallics – including Le Mans blue, Melbourne red and Jerez black (essentially Carbon black) – along with three Individual colours. The two matt metallic colours – Frozen grey and Frozen black – came along later. Inside there were four different leather colours to choose from and extended leather trim was also offered.

Standard interior dash trim was simply matt black while brushed grey and the sexy carbon leather were available as options along with four differently coloured wood trim choices. In 2008 the seven-speed DCT dual-clutch transmission was introduced as an option, costing £2590. Not only did it improve fuel economy by 2.4mpg it also reduced the car's emissions to 263g/km from 290 and made the M3 faster to boot, chopping 0.2 seconds off the 0-62 sprint time. In 2009, when the 3 Series received its face-lift, the M3 gained LED rear lights and hard drive based sat nav with an 8.8-inch high definition screen and 12GB of storage for music files.

In 2008 the M3 line-up grew to include both the Saloon and Convertible. Aside from the physical differences between the cars, they are technically identical to one another. The Convertible is 32mm lower than the Coupé while the Saloon is 23mm taller as well as being 35mm shorter and 13mm wider. The Coupé is the lightest of the trio, weighing in at 1655kg compared with 1680kg for the Saloon and a slightly portly 1885kg for the Convertible – that

means the Coupé is also the fastest version by 0.1 seconds compared with the Saloon and by half a second compared to the Convertible. In Autumn 2009, when the E90 received its face-lift, the M3 Saloon also received the updates which included a new rear light cluster design with L-shaped light strips and LEDs, a revised rear bumper and bootlid, a newly conceived fresh air grille located in the centre of the cockpit, a newly designed storage area under the armrest on the centre console and a pearlescent chrome light switch cluster. All M3s also received crash-active headrests, which were designed to reduce the risk of cervical injury in the event of a rear-end collision and more colours were added to the line up, including Space grey for the Saloon and Le Mans blue for all variants.

Over the years there were a number of 'Edition' models which were mainly trim packages and the specifics of these are detailed on page 61. In 2010 the Competition package was added to the options list and not only was this more performance-orientated than the Edition models, it was also better value. Only available for the Coupé, the Competition package was priced at £3315 when launched and included 19-inch CSL-style alloys, which were only available as part of the package, revised EDC with a Sport setting, a 10mm lower ride height and a recalibrated DSC system. The unique 19s and EDC were worth the entry fee while the further revisions sweetened the deal making it an attractive package worth opting for. All-in-all BMW UK sold around 5500 E92 M3 Coupés, just over 2000 E93 M3 Convertibles and just under 600 E90 M3 Saloons.

Which one to choose?

Your first decision will centre around body style – Coupé, Convertible or Saloon, and it is worth pointing out that if it's the latter you've got your eye on then you might have to be a little less fussy over the spec you want, especially if it's a face-lift you're after as approximately only 250 of these were made for the UK market. Once you've settled on your body the second major decision will be manual or DCT. It's not for us to say which is the better 'box – that's something you'll have to decide

for yourself – some folk love the interaction that comes with using the third pedal, some fall hook line and sinker for the seven-speed DCT with its lightning-quick changes and brilliant rev-matching down shifts. Our best advice is to sample both, and preferably for an extended test drive.

Once you've done that you'll need to know your options – EDC, Bluetooth, DAB, adaptive headlights, heated seats, TV – decide which ones are must-haves and which ones you could live without.

How much to pay will depend on your budget but E92 M3s now start at around £15k for a rough, miley example and rise all the way to £45,000 for a late, low mileage Edition model at a main dealer. If you like the peace of mind that comes with buying from a BMW main agent and the benefit of an extended warranty then the good news is that prices for these machine start at around £22k – or to put it another way, less than you can buy a new 316i for – we know which we'd rather be driving!

Know your M3 Editions

More than any other M3 there have been a plethora of Edition models for the E9x generation of M3, mainly aimed at the Coupé buyer. The vast majority of these were country specific and were generally

introduced to boost flagging sales – the V8 M3 had a tough time on the showroom floor thanks to the global economic meltdown that hit just a year after the car went on sale. BMW produced 85,000 E46

M3s but only 65,000 E9x M3s, and that was despite offering an additional body style too. We don't have space to list all the various Edition models, but these were the ones on offer in the UK.



M3 Edition

In an attempt to entice buyers back into the showrooms, BMW UK launched the M3 Edition in mid-2009 and dynamically it was identical to the standard machine bar a ride height that was lowered by 10mm.

These M3 Editions were available in three colours; Alpine white, Individual Dakar yellow and Individual Monte Carlo blue. Their exteriors had dark chrome shadow highlights – kidney grilles, side vents, bonnet vents and exhaust tips. Mirror caps were black and High-gloss Shadowline exterior trim was standard. Wheels were 19-inch items and these could be painted

gloss black as an option.

There were upgrades to the interior too, with exterior body-coloured stripes on the Novillo leather. Additionally they came with some contrast colour stitching on the seats and armrests while Alpine white cars also had contrast stitching on the standard fit carbon structure leather dash.

The Edition models had an on-the-road price of £53,435 (£2500 more than the standard M3) but given their enhanced spec and bespoke interiors the cars were seen as desirable by customers and the limited run of 330 machines soon sold out.



M3 Edition 500

Despite tough economic conditions the E92 M3 sold in decent numbers – around 700 in 2010 and nearly 800 in 2011. However, by 2012 the car was getting a little long in the tooth and to prevent a falling off of sales, BMW UK launched a run of 500 Coupés and Convertibles with some exclusive colours and interiors. Available in either Imola red, Mineral white or Santorini blue, all models had their kidney grilles, side gills and exhaust tips finished in dark chrome and High-gloss Shadowline exterior trim and 19-inch high-gloss black rims completed the exterior package.

All models featured extended Novillo leather interiors with contrast stitching on the seats and door trim panels. Imola red cars had black leather with Mugello red stitching, Mineral white cars featured Fox red leather with black stitching while Santorini machines were trimmed with black leather and Tobago blue stitching. Each car had Piano black interior trim with 'One of 500' laser cut into the left-hand side dash inlay.

The Coupé cost £55,690 and the Convertible £59,785 – a price hike of just £1000 despite featuring over £4000 worth of extras.



M3 Performance Edition

In the middle of 2012, BMW UK announced a limited run of 30 M3 Coupés and 30 M5 Saloons under the 'M Performance Edition' banner and while they were certainly exclusive they had eye-watering price tags too.

The cars were to showcase BMW Individual's talents and were available in three Frozen paint colours; Individual Japan red with a Frozen red wrap, Individual Frozen white and Individual Frozen blue. To complement the exterior colours, they came with extended Black Novillo leather upholstery with contrast stitching. An Alcantara steering wheel, Piano black interior trim with a 'One of 30' laser cut designation, front headrests with M stitching and door sills with 'BMW M Performance Edition' designation completed the look of the interior.

The M3 M Performance Edition had the standard V8, M DCT 'box and the

Competition package with 10mm lower suspension and revised DSC system. Additionally, it boasted an array of extra standard equipment including; 19-inch M Y-spoke matt black alloy wheels, Dark Chrome exhaust, side gills and kidney surround, Jet black bonnet intakes, carbon-fibre front splitters, high-gloss Shadowline exterior trim, folding exterior mirrors and sun protection glass. Adaptive headlights, DAB digital radio, a Harman/Kardon 13-loudspeaker system, Professional Media Package, mobile application preparation, telephone USB audio interface and internet, front seat heating and front and rear Park Distance Control added to the M3's extensive list of equipment. All-in-all BMW said that the M3 M Performance Edition had £9790 worth of additional kit which made its £74,080 price tag seem somewhat excessive.



M3 Frozen Silver Edition

To celebrate BMW M's 40th anniversary BMW launched the Frozen Silver Edition and just 100 of these models were destined for UK consumption. They were all based on the Competition package machines so had 10mm lower suspension, Electronic Damper Control, 19-inch alloys and a revised DSC system. All 100 cars were also equipped with the seven-speed M Double Clutch Transmission.

Externally they were all painted in Frozen Silver Metallic paint – not seen on any BMW before – and had matt black alloys, Dark Chrome exhaust, side gills and kidney surrounds while the bonnet intakes were finished in Jet black along with

High-gloss Shadowline trim.

Inside there was black Novillo leather with contrast stitching with Palladium leather armrests and inserts. The steering wheel was covered in Alcantara, the handbrake handle had M Power stitched into it and there was a plaque indicating the limited edition nature of the car. There were liberal applications of carbon fibre interior trim while the steering wheel and the door shuts featured an M3 chequered flag motif.

The Frozen Silver Edition cost £58,720 when it went on sale – £4000 more than a regular M3, despite having over £9000 worth of additional equipment.



Wheels, tyres and brakes

The vast majority of M3s were fitted with the optional 19-inch alloys and they do look good, filling the arches more convincingly than the 18s and the Comp pack CSL style wheels look better still to our eyes. The car does ride better on 18s though – the choice is up to you. Check tyres for tread depth and sidewall damage and look at the brand too – you really want to see a matching set of quality tyres on there. If an owner can't afford a set of decent boots what else have they skimped on?

Brakes are pretty simple really, although if you do drive very enthusiastically and see the DSC light illuminated often you will go through rear pads pretty quickly as they're used to brake individual wheels. Replacement front pads shouldn't cost more than £250 and rears about £225 – and that's at a main dealer. How long your discs last will be down to driving style but if you need pads and discs all-round you'll be looking at about £1200.

Exterior

The M3's still quite a new car, but the oldest are now eight years old so it's inevitable that some cars will have a hidden past of one sort or another. The first thing to say is that if you're looking at a white Coupé then make sure it wasn't used on track as one of the Motorsport Vision or Palmer Sport cars. While these cars will have been impeccably maintained they will have spent many hours on track and may feel a little tired.

Examine all cars for consistent panel gaps, that the paint matches well between panels and satisfy

yourself it's not been in a major prang. Are there any stone chips? A few are acceptable, serious stone rash isn't. And if there aren't any at all this might indicate that a car has had a front end blow over – not a problem if it's just been done to get rid of stone chips, but could it have been done to hide something more sinister?

While you're about it check the lights for stone chips too as you don't want moisture getting in which looks unsightly. Also check that the xenons light up quickly and uniformly – if they look a

different colour or one side comes on faster than the other then repairs will be needed soon.

On Coupés check the condition of the carbon fibre roof, stone chips can lead to the lacquer peeling and over time the panel can discolour too.

On Convertibles you obviously need to check the roof operates seamlessly – in general they're pretty reliable but microswitches can fail leading to a jerky operation or failure to function and a lack of lubrication can sometimes cause the mechanism to stick and fail to raise without assistance.



Servicing

Servicing shouldn't break the bank but as the M3 uses the condition-based servicing system it can feel like they come round quickly. An oil service at a main dealer will be about £240 (or £370 if the microfilter's done at the same time) and if you need an oil service, air filter, plugs and microfilter all done at once you'll need around £750. A vehicle check will cost £60-70 and a brake fluid change should be less than £100. Independent specialist should be able to beat those prices, too.

If you have an Approved Used or a BMW Extended warranty then you must use a main dealer for servicing. Block exemption that allows you to have a new car serviced anywhere (so long as OEM quality parts are used) without invalidating a manufacturer's warranty doesn't apply to extended warranties.



Interior

Interiors are generally pretty durable but do all the usual check that the wear on seats, gear knob and steering wheel are commensurate with the car's mileage. Checking the leather will be your main concern as significant damage could be expensive to put right, especially on one of the Edition cars.

The seat belt 'butler' that gives you your seat belt in a Coupé are notoriously unreliable but it's not the end of the world – replacing the mechanisms will sort the problem.

Check the iDrive works properly, and while we're on the subject of iDrive it is worth pointing out that the system fitted to the face-lift machines

is significantly better than the one in pre-face-lift machines. The LCI system is easily spotted by the different controller with favourite buttons around it. Glitches with the iDrive should be able to be sorted by a Software update, but it's not unheard of for the system to fail completely which could leave you staring down the face of a £2k bill.

Surprisingly, Convertible owners have complained of leaks from the roof, which mainly occur around the A-pillar area where the roof joins the windscreens. Rattling windows with the roof down is also a common complaint, though they can be adjusted to alleviate the problem.



Suspension and drivetrain

Other than the need for replacement bushes the M3 is good on the suspension front, but bear in mind that a car with EDC will be more expensive over the long term than one without it. So far the EDC has proved to be reliable and parts costs are more palatable than for other EDC-equipped BMWs, but you could look at it as just one more thing to potentially go wrong and another good reason to opt for an extended warranty.

Clutch and flywheel noise when in neutral with the clutch engaged is nothing to be concerned about – it would appear that the manual gearbox is quite noisy. If the noise becomes anything more than a light ticking/rattling sound, however, then we'd advise you to have this investigated. Owners have also reported noisy diffs, especially when manoeuvring at low speed, with a diff oil change

usually resolving this problem. DCT has suffered from numerous problems, the most dramatic of which being that the gearbox would refuse to change down under braking and as a result the car would stall and a common complaint is DCT 'lag' where you need to apply a lot of pressure on the accelerator to get the car to move off at which point it accelerates more quickly than you actually need it to. There have been numerous software updates issues to deal with these and other DCT problems so a DCT car should feel healthy though never assume that updates have been applied, often you have to ask if there are any specific updates available for a certain area of the car.

Overall, though, barring software issues the DCT does seem to be massively more reliable than the SMG 'boxes in the E46 or E60 M5/E63 M6.

Engine

Given that the 4.0-litre V8 is kicking out over 100hp per litre it's looking to be remarkably durable but like any engine there are a couple of niggles. It can suffer the occasional sensor or coil failure but you're most likely to suffer from failed throttle actuators. There are two, one for each bank of cylinders and at over £700 for each of them once labour's been factored in you could be looking at a £2000 repair bill to replace a pair. The first warning sign will be a series of warnings that will flash up on the iDrive monitor – 'Engine fault! Reduced power', 'DBC failure! Drive moderately', 'Start assistance inactive!' and 'DSC failure!' being the most common. There was a time when replacement was your only option but there are now companies offering replacement gear wheels inside the actuators which can result in a considerably lower bill.

Another point to note is that as the S65 is very closely related to the S85 V10 from the E60 M5 it's possible that the same rod shell problem that's now becoming a problem for the V10 will affect the V8. There do seem to have been a few isolated cases of premature wear happening and bar having them replaced there's not a huge amount you can do about it other than have frequent oil changes and be careful not to rev the engine hard until the oil's properly warmed up. If a major engine repair would break you financially then an Extended Warranty from BMW is a must.

Verdict

Overall we absolutely love the M3. It does have a couple of foibles that could rear their ugly heads and end up being costly but generally speaking it's been one of the most reliable M cars of recent years. Go in with your eyes open, do lots of research and don't be afraid to have a car independently inspected – it'll be money well spent. Buying from a BMW main dealer will give you peace of mind and the BMW Extended Warranty is a major plus – you'll very rarely have any quibbles over warranty work and you'll be able to sleep easy at night knowing that if your throttle actuators do fail you'll be properly covered.

But when you're behind the wheel any reliability concerns will be blown away by the car's mesmerising performance. It devours back roads like they're going out of fashion and to hear that V8 sing is to witness greatness. There won't be another so snap one up before it's too late



E90, E92 and E93 M3

	Coupé	Saloon	Convertible
ENGINE:	V8, 32-valve	V8, 32-valve	V8, 32-valve
CAPACITY:	3999cc	3999cc	3999cc
MAX POWER:	420hp @ 8300rpm	420hp @ 8300rpm	420hp @ 8300rpm
MAX TORQUE:	295lb ft @ 3900rpm	295lb ft @ 3900rpm	295lb ft @ 3900rpm
0-62MPH:	4.8 seconds (DCT 4.6)	4.9 seconds (DCT 4.7)	5.3 seconds (DCT 5.1)
TOP SPEED:	155mph (limited)	155mph (limited)	155mph (limited)
ECONOMY:	22.8mpg (DCT 25.2)	22.8mpg (DCT 25.2)	22.2mpg (DCT 24.6)
EMISSIONS (CO₂):	290g/km (DCT 263)	290g/km (DCT 263)	297g/km (DCT 269)
PRICE (NEW):	£50,625 (2007)	£49,900 (2008)	£55,300 (2008)



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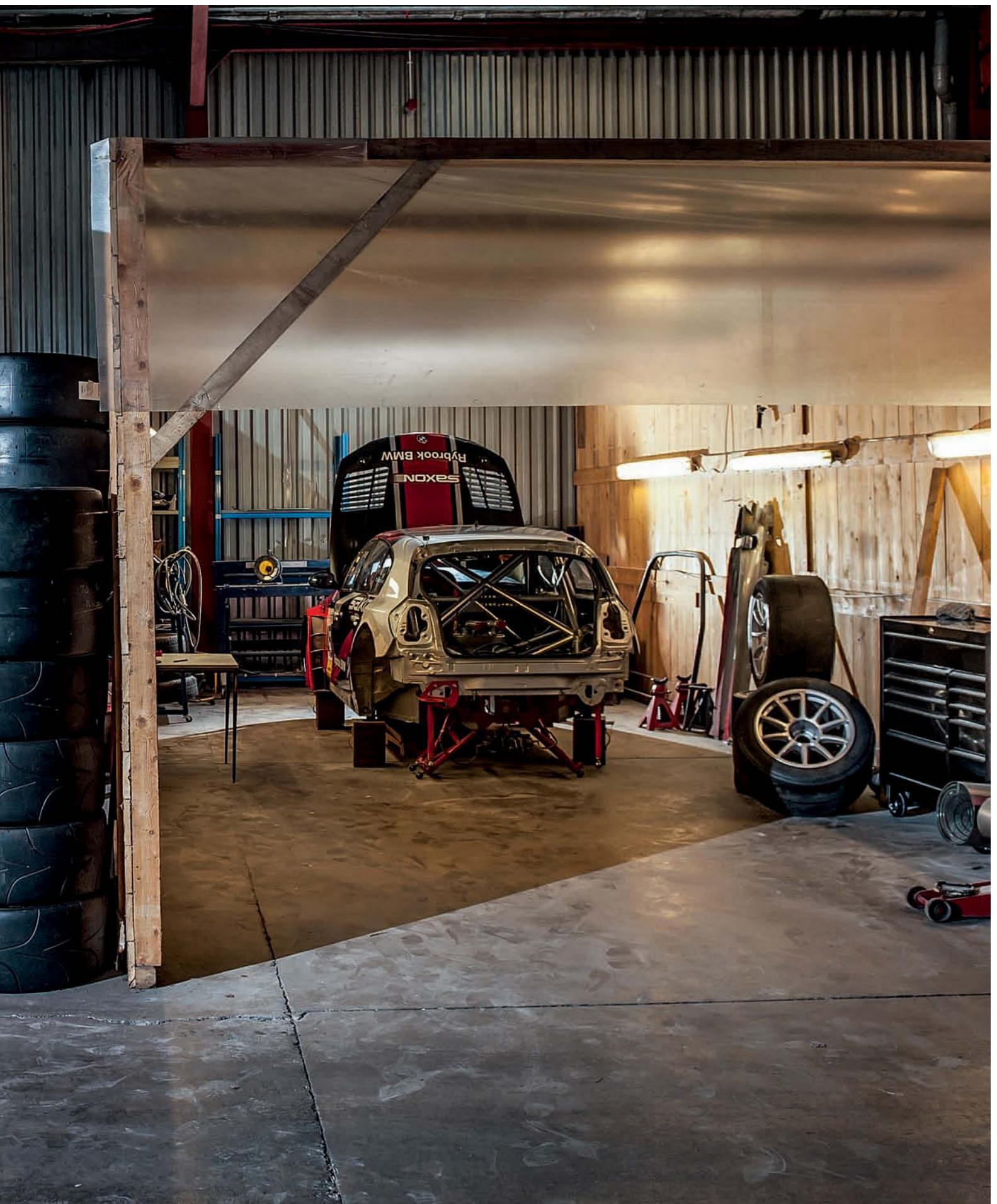
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ALL IN ONE

We pay a visit to Saxon Motorsport to have a look round the fleet of innovative 1 Series road and race cars it has been busy building...

Words: Simon Holmes Photography: Laurens Parsons







As Nick Barrow, owner of Hereford based Saxon Motorsport, walks me through his vast workshop, warm cup of coffee in hand, the sheer magnitude of what I'm taking in, both visually and verbally, has caught me a little off guard. We have travelled up to see Nick's rather interesting 1 Series race car that competes in various endurance races around the world. It's interesting because it happens to be powered by the slightly unusual choice of a 3.0-litre, twin-turbo diesel engine donated from a 535d.

When I first spoke to Nick he mentioned that he was just carrying out some modifications on his other 1 Series race car that we may be interested in, this time powered by the V10 engine from an M5. Quite a contrast there. When he then told me he was just finishing the build of a third racing 1 Series, powered by the current diesel engine from an X5 M50d, I promptly set a date to see for myself.

Of course, that phone call alone should have given me a big clue as to what to expect but I hadn't guessed Saxon Motorsport's abilities would be quite so comprehensive. Yet here is Nick, very matter-of-factly pointing out items of interest on my tour, such as complex hand-made suspension components he designed and fabricated himself. Or a 5.8-litre stroker kit waiting to be fitted to the stripped down V10 block sitting close by on an engine stand. He shows me the soundproofed dyno cell, a separate storage unit where the M5-powered car resides and an engine room decorated with two-stroke go-kart engines, many of which he built himself. It is these very engines that have, in fact, proved to play an integral part of Saxon Motorsport's history.

It all started for Nick when, at an early age, he developed a passion for racing. Influenced by his father, who was also a keen and talented driver, Nick began with go-karting and quickly moved on to motocross events as a cheap form of motorsport, before settling on road rallying some time later. He enjoyed the rallying days and, as a keen engineer, began preparing and building the cars he competed in himself. However, as road rallying evolved to become more stringent, an experienced Nick began looking at other motorsports. Circuit racing was the obvious choice, but after having done 200-mile road

rallies Nick quickly found that a simple 15-lap race didn't quite scratch the itch he was looking for. It just wasn't enough seat time. Then, around 20 years ago, Nick was invited by a friend to drive a stint at an endurance race in a Peugeot 205. The seat time was more in keeping with Nick's taste and it wasn't long before he was taking drives in other cars at other endurance events, including the iconic 24-hour race at the Nürburgring.

At this stage, Nick was racing in other people's cars, simply sharing the seat time as a part of the team of drivers required to do these kinds of gruelling events. The type of car he was racing was not important, as long as it was well built, competitive and, above all, safe. He did well in this field and in 2008 he raced in an E36 M3 that managed a very impressive ninth place overall at the 24-hour Nürburgring event.

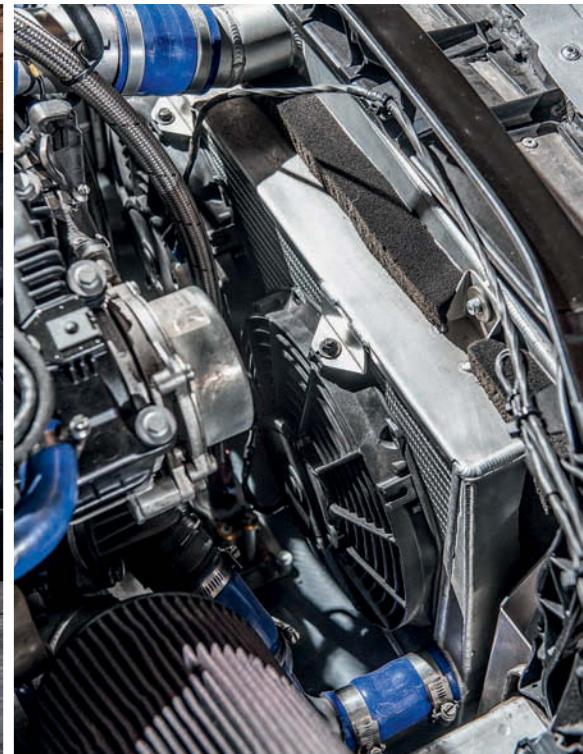
Since then things have progressed somewhat for Nick. The Saxon Motorsport race team he now heads designs and prepares the endurance cars Nick and the other drivers race. Saxon Motorsport was, in fact, up and running some years ago but it primarily concentrated on go-karting – hence the decorative engines that adorn his build room. The company was first formed largely to aid his children who, at the time, actively competed in the sport. Being a man of many talents, Nick took it upon himself to build the karts and the engines and in doing so gained quite a successful reputation. However, when his children grew up and decided to move on to other pastimes Nick seized the opportunity to expand his hobby – and Saxon Motorsport – and build his first circuit car.

The decision to utilise a 1 Series diesel came about around five years ago, when Nick was asked to race in an E90 3 Series diesel that had been prepared for endurance racing. Although the overall result was disappointing, the process did serve a purpose, as it opened Nick's eyes to the potential of a using a fast diesel. The car had been fitted with the M57 engine found in the 335d and it not only produced plenty of usable power but it was also able to go for longer on a tank of fuel.

A plan was soon devised and Nick began his research. The E87 1 Series was notably lighter than the 3 Series counterpart and it was a rarer sight on the track, which also appealed. The rules allowed any







135d Endurance Car

ENGINE & GEARBOX: M57 3.0-litre, twin-turbo diesel, Bosch Motorsport ECU, Saxon Motorsport radiator and intercooler, 330d six-speed gearbox with CAE shifter

CHASSIS: KW Automotive Competition three-way adjustable coilovers with remote reservoirs, Saxon Motorsport anti-roll bars, front subframe and rose-jointed, double wishbone rear subframe, air-jacks

BRAKES: AP Racing six-pot callipers, 360mm discs, AP Racing pedalbox, standard rear brakes, new brake lines throughout

WHEELS & TYRES: Braid lightweight alloy wheels in a range of sizes and with tyres to suit

INTERIOR: Full integral roll-cage, Saxon Motorsport dashboard, carbon fibre door panels, driver's seat moved back

EXTERIOR: Full Flossman aero body kit made from carbon fibre, Saxon Motorsport rear wing, polycarbonate windows, Saxon Motorsport livery



engine from the same car manufacturer to be fitted, so the idea of creating a 135d seemed feasible. A lightly crash-damaged 1 Series was sourced and promptly stripped down to a bare shell, acid dipped and fitted with a comprehensive roll-cage that was designed and constructed by Nick and the team to the correct regulations. They then began investigating the ins and outs of fitting the M57 engine and, being new territory to them, actually asked a rival race team for some advice which proved to be very helpful. So an engine was purchased, mounted and plumbed in, although there were other areas to consider when it came to reliably racing the car on track, which is why a mule car was built in the meantime (see page 76).

Elsewhere, the rule book was fairly open allowing substantial modifications, so with his previous experience preparing rally cars Nick took the opportunity to redesign key items such as the complete subframes, the anti-roll bar setups, the cooling systems and, well, just about everything else.

"We know what we are looking for so we do as much as we can on site and luckily, Johnny, my main

engineer is a very talented guy," explains Nick. "Everything we farm out never tends to work as well as we hoped so we end up doing it here. That way we're not waiting on people either. And having the dyno here means we can spend as much time as we need to playing with the car."

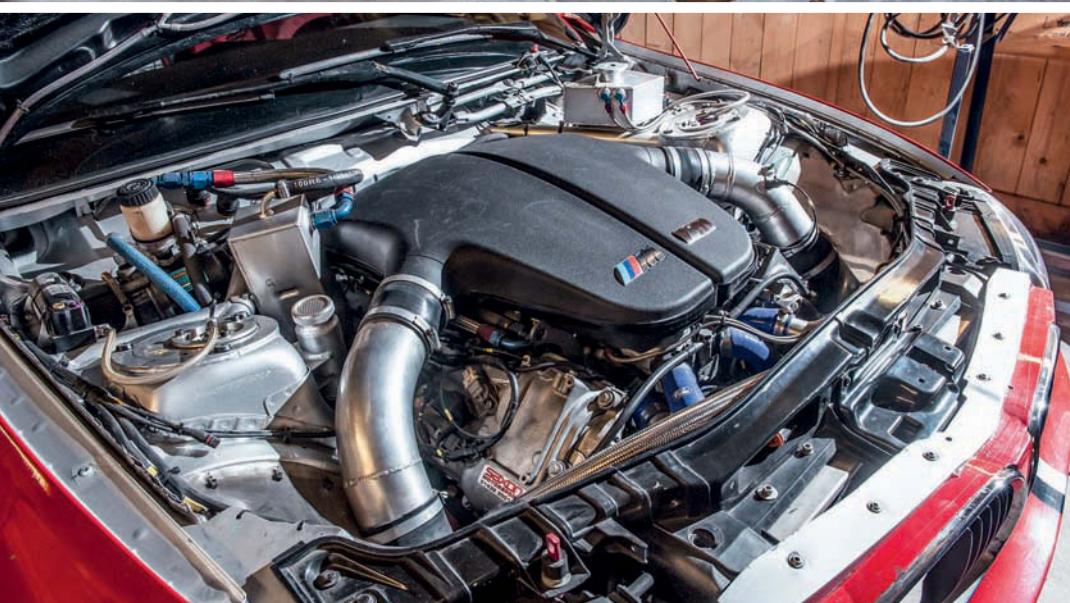
The car took around 18 months to finish, which is good going considering the amount of design and fabrication undertaken. With the car complete it was inevitably time to hit the track for a couple of shakedown sessions, although this wasn't without its problems. During the very first practice at Silverstone the sump plug was ripped out running over a curb, taking the engine out in the process as it was starved of oil. "That was an expensive mistake. We always move the sump plugs now," tells Nick.

The session also revealed the car struggled to keep planted at speed, so a rear wing was designed and installed to gain some much needed downforce at the rear. But since then the 1 Series has performed faultlessly and it's been very successful, too. It's won its class in virtually every VLN race it's been entered in

and it's proved to be reliable during two 24-hour races at the Nürburgring. In fact, the only time it failed to win was when it came second at a 24-hour event after it crashed, requiring over two-hours in the pits whilst it was fixed before being sent back out where it battled back to a second place finish.

Throughout the season the only real problems with the car have been cooling related as the car was running hot, particularly when abroad. "It ran hotter than we would have liked it to but it never actually overheated," explains head mechanic and engineer Johnny. "We initially countered the problem by fitting a secondary radiator in the boot but we eventually redesigned the front end setup to gain more airflow and we found we could then remove the second radiator. We're a good team as we tend to bounce ideas off each other like that. Optimising the aero has also been a constant challenge and so has battling weight. We use carbon fibre panels but we do have to compromise but we love a challenge."

The vital experience gained from building, developing and successfully running the car over a



S85 V10 1 Series Racer

ENGINE & GEARBOX: M5 V10 engine, Pectal Motorsport ECU, Drenth six-speed sequential gearbox with paddleshift, M5 differential and driveshafts, Saxon Motorsport exhaust system, mounts and radiator

CHASSIS: KW Automotive Competition three-way adjustable coilovers with remote reservoirs, Saxon Motorsport anti-roll bars, front subframe and rose-jointed, double wishbone rear subframe, air-jacks

BRAKES: AP Racing six-pot callipers, 360mm discs, AP Racing pedalbox, standard rear brakes, new brake lines throughout

WHEELS & TYRES: Braid lightweight alloy wheels in a range of sizes and with tyres to suit

INTERIOR: Full integral roll-cage, Saxon Motorsport dashboard, carbon fibre door panels, driver's seat moved back

EXTERIOR: Full Flossman aero body kit made from carbon fibre, Saxon Motorsport rear wing, polycarbonate windows, Saxon Motorsport livery



couple of seasons gave the team valuable experience, and it was from this that the idea to build a second car started to form.

This evolution version would be built to tackle a different task as, although the diesel was undoubtedly a success on track, it had both plus points and limitations. Nick wanted to enter more events, and he knew that to be competitive on shorter races he would need something much quicker. This time, the team would need a serious horsepower injection and so a 5.0-litre V10 engine from the E60 M5 was selected as the new powerplant. It may seem like overkill but the choice was, in fact, very logical. Knowing it would require a power figure around the 600hp mark to be truly competitive the team initially looked at the V8 from the E92 M3, with the intention of supercharging it. This idea was then discarded as there was concern that the engine would be under too much stress. A viable alternative was to choose a bigger and more powerful engine to begin with, one that would make the desired power with less effort. For this the S85 V10 unit was ideal.

Happy with the 1 Series platform, the team embarked on the second build at the end of the 2012 season. It followed the same footsteps as the first, although more time was taken to remove unnecessary weight from the shell as it was being prepared. Although it shares similar underpinnings to the previous car, certain areas were also beefed-up to cope, such as the rear cradle which houses the much larger and stronger M5 differential and driveshafts. The engine itself was mounted in position on a custom-made subframe and mounts and it's fitted with a flatter, billet dry sump design to get it lower in the car. Again the complete cooling system, exhaust

system and other associated parts (such as the intakes) were designed and fabricated in-house.

Although the team originally considered using the BMW SMG III gearbox, it eventually opted for an aftermarket six-speed sequential from Drenth, equipped with a paddle-shift. A Pectal Motorsport ECU controls the engine and the all-important traction control system, as, unsurprisingly, grip is proving to be an area that needs further development. "The traction control system is good but it means we're not using full power. We know we need bigger tyres, which is what we're working on right now. We've modified the inner and outer arches to run much larger 315 section tyres, which should give some much-needed grip."

Nick reports that, otherwise, it's actually a relatively easy car to drive and despite their different powerplants the cars are similar on track. "Both cars are set up to be very neutral, which they have to be due to the different drivers that get behind the wheel during a race," reveals Nick. "There isn't actually a lot of difference between the cars, but, of course, the power is worlds apart. The diesel power band makes it a funny thing to drive: there's loads of torque and you can afford to keep it in a higher gear whereas the petrol car has to be worked a bit more."

That is why, after another year or so Nick and team decided to build another car, an evolution of the previous incarnations that would be better, lighter and faster. Here, everything the team had learnt and were capable of was showcased in a highly-developed car. Again, a road-going 1 Series was sourced and it was subject to a weight-saving plan even more rigorous than the previous cars. More time was invested preparing the shell, stripping the car right down to

N57 M50d 1 Series Racer

ENGINE & GEARBOX: N57 M50d engine, Drenth six-speed sequential gearbox with paddleshift, Saxon Motorsport tubular exhaust manifold, intercooler and V-mount radiator, Borg Warner twin-scroll turbo, pressurised cooling system, Bosch Motorsport ECU

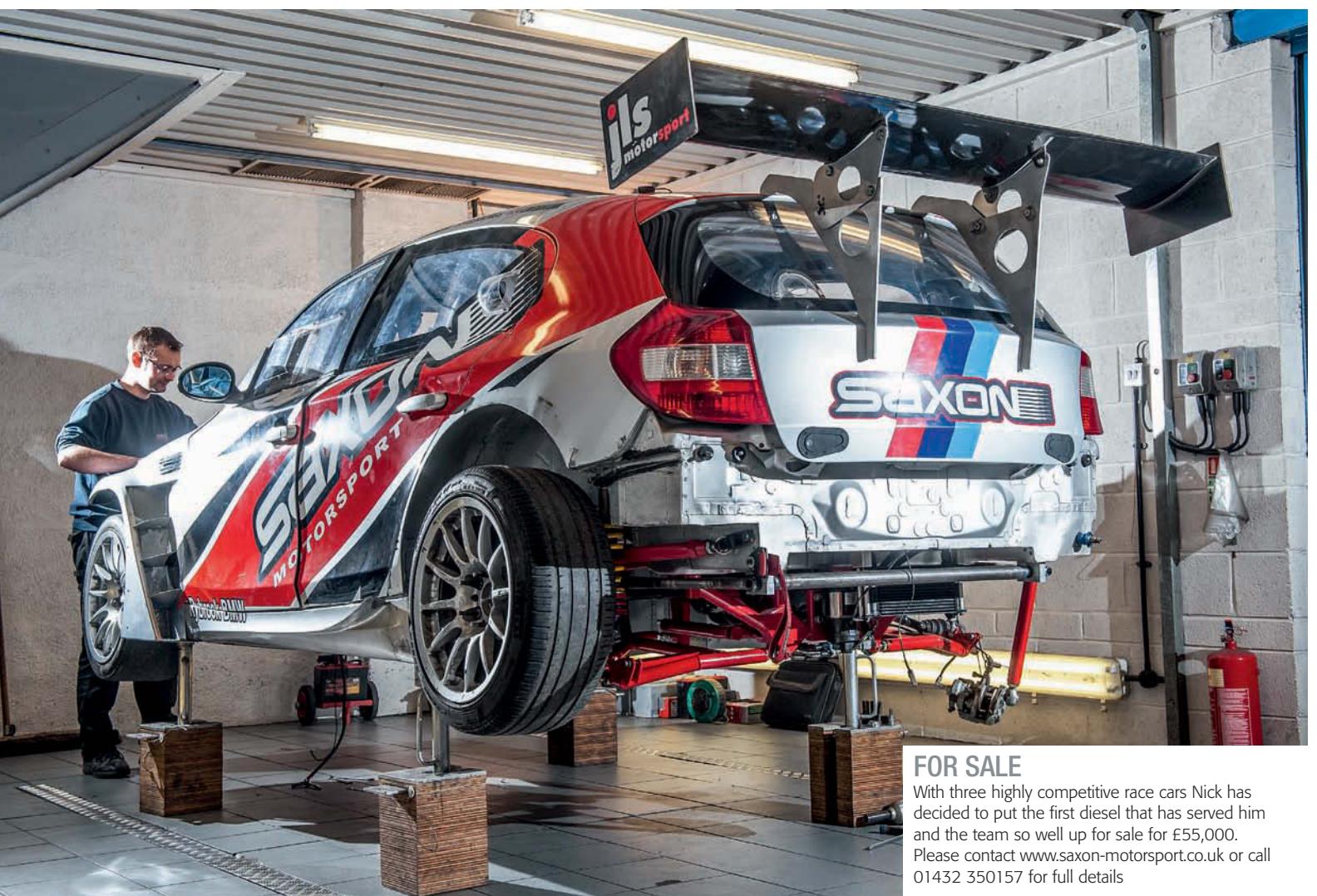
CHASSIS: KW Automotive Competition three-way adjustable coilovers with remote reservoirs, Saxon Motorsport anti-roll bars, front subframe and rose-jointed, double wishbone rear subframe, air-jacks

BRAKES: AP Racing six-pot callipers, 360mm discs, AP Racing pedalbox, AP Racing four-pot rear callipers, new brake lines throughout

WHEELS & TYRES: Braid lightweight alloy wheels in a range of sizes and with tyres to suit

INTERIOR: Full integral roll-cage, Saxon Motorsport dashboard, carbon fibre door panels, driver's seat moved back, adjustable travel pedal box

EXTERIOR: Full Flossman aero body kit made from carbon fibre, Saxon Motorsport rear wing, polycarbonate windows, Saxon Motorsport livery



FOR SALE

With three highly competitive race cars Nick has decided to put the first diesel that has served him and the team so well up for sale for £55,000. Please contact www.saxon-motorsport.co.uk or call 01432 350157 for full details



nothing to start from scratch. Even the quarter panels were removed and weight removed from every area.

At first it was fitted with another M57 engine but keen for more power and less weight it was soon changed to the 376hp version of the current N57 diesel engine. This 3.0-litre, all-alloy unit usually resides in the M50d versions of the current X5 and X6 M, complete with a triple-turbo arrangement. Nick sourced the very rare engine from Germany and the complex turbo setup has been removed and replaced with a large, single twin-scroll turbo mounted on a custom-made tubular manifold that was designed and fabricated by Johnny. The aim is for a reliable 420hp and it's connected to another paddle-shifted, Drenth supplied six-speed sequential gearbox.

The car also features some extremely clever innovations such as the pressurised cooling system and a V-mounted radiator that allows for lower operating temperatures. Or the driver's seat, which is mounted further back, to aid weight distribution and features a pedalbox with adjustable travel to suit

different drivers. Overall the car is at least 50kg lighter and there's better braking and aero than before.

The plan now is enter the car in Britcar, VLN and endurance races across the world and this time eyes aren't on class wins but overall results. The car has already ventured out once with the older M57 engine where it managed a promising 13th overall before retiring, so it's certainly within grasp it seems. "It retired due to a completely unforeseen issue as it turned out the fuel was getting too hot," explains Nick. "We have since cured this by redesigning the fuel tank."

By the time you read this, the Saxon Motorsport team will have been busy. Both of the cars pictured here in pieces will have been completed and sent for shakedown tests. There's more to come, too, such as the aforementioned 5.8-litre stroker V10 engine being built to replace the standard M5 engine for some added grunt and with a busy season ahead we plan to keep updated with the Saxon Motorsport team. At least we know what to expect from now on... ●



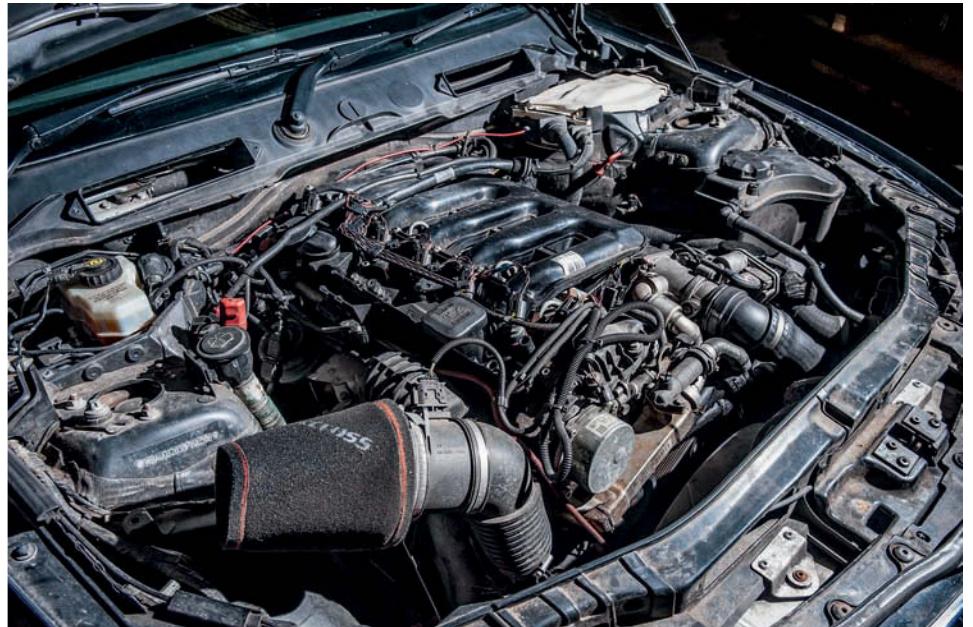
The 135d mule car...

For some reason or other BMW decided it wouldn't be a good idea to build a 135d. By that I mean fitting the 3.0-litre, twin-turbo, M57 diesel engine into a 1 Series. It found its way into plenty of other BMWs but clearly it was deemed inappropriate for the entry-level platform. Subsequently, I've often wondered what it would have been like. I've even heard of it being done before, but only once or twice. On paper, it would, in theory be a hugely capable road car, but the chances of experiencing one without actually building one myself seemed slim. However, Saxon Motorsport inadvertently solved this dilemma for me when constructing its first endurance racer. During that build the main area of concern when it came to the engine conversion was actually the management side of things. The options were to either adapt a standard BMW ECU or use a complete, and costly, aftermarket replacement. The way to find the answer was simple: Nick and the team would build a road-going test car fitted with an M57 engine conversion to find out just how hard it would be.

So, a standard E87 118d was purchased and relieved of its running gear and an M57 engine from a 535d was then sourced. Getting the engine fitted in the car was actually a relatively simple procedure with



The Saxon Motorsport team certainly know how to put a car together and both the quality of their builds and success on the circuit prove that. All of the cars are special but it's the third evolution that will really be the one to watch and we hope to bring you an update in the coming months as they aim for overall results rather than class wins



the correct parts on hand. The sump and six-speed manual gearbox from an M57 330d were attached and the engine was mounted on an E90 3 Series subframe and bolted into the 1 Series chassis without further modification. The 3 Series also donated its matching rear subframe and axle, which again bolted up without issue. The guys then plumbed and connected the engine up and fabricated the custom exhaust system and intercooler in-house.

With everything mounted in place the hard part was then getting the engine to run in its new home. Not wanting to get involved with the potential electrical nightmare it posed, Nick entrusted the work to another company that had done a similar conversion before. However, this car proved particularly difficult, as there was now a combination of 1, 3 and 5 Series wiring looms to seamlessly splice together as a 3 Series ABS module had also been fitted. It was a task that was expected to take a couple of weeks but, in total, it ended up taking around three months to get the engine running and everything working correctly as it should!

In doing so, the test car did what it was supposed to; the amount of time the wiring took convinced Nick that converting the standard ECU was too much of a

complex and specialised procedure. Race cars have to be simple to maintain and the last thing the team wanted was to retire from an event due to a wiring fault that couldn't easily be traced. So instead, Nick bit the bullet and selected the alternative of a Bosch Motorsport ECU. He then sent Johnny on a course to learn how to map and install it so it wouldn't throw up any problems the team couldn't solve.

With its mission complete, the original mule car now serves as a rather understated road car that no doubt catches a few people off-guard. It's also ventured out onto the track before with Nick behind the wheel. He reports it surprised a few people there, probably as the 118d badge is still in place!

The car currently has around 300hp on tap, thanks to the bigger intercooler and basic remap and Nick kindly offers me a drive so I can finally discover what a 135d is like! Inside the car looks and feels just like you would expect a well-worn 1 Series to, there's nothing to give the game away and all the dash lights and displays work as normal. Amusingly, it requires both the clutch and brake pedal to be depressed before the engine will start, traits both carried over from the mix of 1 and 5 Series starting procedures! The exterior is much the same; it's a well-used car

with only a set of aftermarket alloy wheels to differentiate it from a standard car.

However, pulling away it immediately becomes clear all is not as it seems. At low speed there's notably more grunt than you would expect from a 1 Series diesel but as soon as you find a stretch of road and press on the throttle a huge wave of torque arrives, catapulting you forward. It's natural to short-shift when this happens but you soon realise you're shifting below 3000rpm and yet the car is still gaining speed effortlessly. The mid-range punch it is able to deliver for immediate overtaking is colossal and when you do keep your foot down past the 4000rpm mark it collects pace relentlessly. Unlike a normal 1 Series diesel the power doesn't even hint at tailing off as the revs climb either and the torque spike is similar to my own 135i. And yet, despite the engine's hard hitting delivery, the E87 seems to take it all in its stride. Although it feels powerful there's never any sign or indication the car isn't happy delivering the power to the road. As a point-to-point car it would unquestionably be devastating in the right hands and it's a thoroughly impressive conversion. I've always wondered what this would be like and now I finally know. I want one...

What's involved? E92 M3 brake test

Autobild Sportscars magazine in Germany pitches five brake manufacturers against the BMW factory brakes in the most comprehensive test we've ever come across...

Words and pictures: *Autobild Sportscars*

When it comes to aftermarket brake packages, we have become accustomed to seeing drilled or grooved brake discs that are larger in diameter accompanied by huge callipers that incorporate four-, six- or even eight-pistons. Furthermore, these are usually brightly coloured and prominently feature the manufacturer's brand logos, so they have a striking appearance. However, these packages are not just about looking good, they have to outperform the stock items and, hopefully, by a considerable amount.

The trouble is, it's difficult and time consuming to thoroughly test a brake package and, in most tests we've performed before, aftermarket brakes rarely display what they are truly capable of. After three to five laps on a race track, most sport brakes are often only beginning to warm up and even after several high speed tests some have only just reached their operating temperature so test results from 200km/h (124mph) and 100km/h (62mph) to zero are often

rather disappointing. At least, that is what some tuners and brake manufacturers claim. For us, that's reason enough to challenge these statements using specially devised tests to gauge their true abilities.

The requirements were simple: a matching test car and ideal conditions. We are talking perfect, dry conditions, appropriate temperatures and a test track that provides suitable grip. We found all these at the DEKRA test centre near the Lausitzring, in Germany. The contestants are five aftermarket brake packages from AP Racing, Brembo, K-Sport, PFC, and Stoptech and these will challenge the stock M3 brake setup. BMW tuning and brakes expert, Marc Müller from Lightweight Performance (www.lightweight-performance.de), will also be joining us. He brought along the ideal test car in the form of an E92 M3 that was modified as a capable track tool. Müller has already tested various equipment on different BMW models both on and off the track, so he was particularly useful supporting us with advice and assistance during the tests.





AP Racing
£2714

Brembo
£3717

K-Sport
£1965

PFC
£3470

Stoptech
£2585

Original BMW
£1624



The test:

So what did we measure and how did we actually measure it? Primarily, we wanted to know how long it would take each brake package to bring the car to a complete stop. Ten measurements from 200km/h and ten from 100km/h to zero were agreed and supplemented by ten emergency brake tests from 250km/h (155mph). This speed is realistic for the vehicle, especially on the motorway, and this way all the systems should reach the necessary operating temperatures. We also marked the packages for weight, response, pedal feel and pressure on a handling circuit.

To ensure identical test conditions we came prepared with six sets of the correctly sized Michelin

Pilot Sport Cup2 tyres, changed for each of the participants. Furthermore, the car was refuelled after each test so weight was identical and absolutely nothing left to chance.

Great care was also taken during the initial bedding-in procedure for each of these brakes as there is a lot of room for mistakes here. For this reason, we exactly followed the recommended procedure for each manufacturer. Stoptech was rather casual about this; a few brake stops at lower speeds should suffice. Brembo, on the other hand, required the discs to assume a grey colour on the edges before they are ready for use. AP Racing advocated an even more complex approach: "Brake lightly at

least 30 times from 90km/h to 50km/h, preferably in blocks of five brake stops. At least 800 metres driving distance should lie between the individual stops." So that is exactly what we did.

Elsewhere, we also graded the packages for their price versus performance value, which also covered the installation and the overall quality of the package. For example, did everything fit directly as it should? Did the package contain everything for a simple installation? Here, there were positive and negative cases. AP Racing provided an extremely comprehensive package, which even included the brake fluid. On the other hand, the brake hoses supplied by K-Sport did not fit as they should.



AP Racing Big Brake Kit

Price: £2714

Part number: CP5555-49

Disc size: 378mm

Weight: 30kg

Value: 4/5

Response: 4/5

Pressure point: 5/5

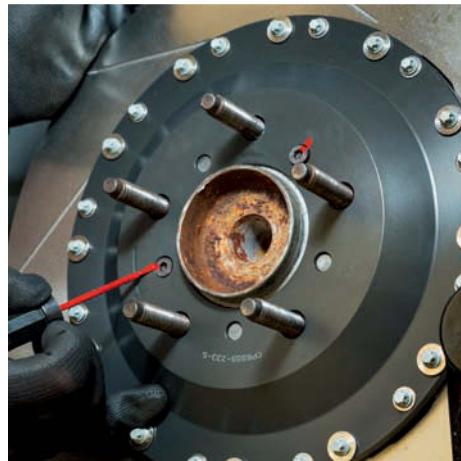
Pedal Feel: 3/5

Distance: 5/5

Total: 4.2/5

The name AP Racing is well known in the world of motorsport and that is perhaps the area it is most commonly associated with. However, the manufacturer also has something to offer for the road.

Its Big Brake Kit offers fully floating, grooved discs measuring 378mm in diameter, along with six-piston callipers that feature removable retaining pins for faster brake pad changes. For what you get the price seems reasonable and the assembly process and package contents were exemplary, as were the stopping results. No other package managed better stopping distances for both the 100 and 200km/h tests. Also, a 30.2-metre stopping distance from 100km/h with a deceleration rate of 12.7 metres per second are statements in themselves. We did find that the pedal became a little soft in the most critical phase however the pressure point always remained constant.



Even the AP-supplied brake fluid is exemplary

K-Sport 8-Piston

Price: £1965

Part number: KS-BV-2552

Disc size: 380mm

Weight: 37kg

Value: 2.5/5

Response: 2/5

Pressure point: 3/5

Pedal Feel: 2/5

Distance: 4/5

Total: 2.7/5

For an eight-piston calliper with Pagid RS29 pads and 380-millimetre discs the K-Sport kit is very competitively priced. The equipment is manufactured in Taiwan, which means some may doubt their quality, however we found the brakes to not only look very attractive but also perform well.

The package includes all of the necessities for a professional installation and we liked that the brake pads can be easily replaced without removing the calliper. However, the assembly is not without problems as the supplied stainless steel brake lines did not fit the original connection fixture. Also, during the brake stops, there were notable strong vibrations and it did not improve after an inspection in the workshop either, which was a substantial shortcoming. Therefore, in spite of good performance and the second-best measurement in the 200km/h test, this package must settle for the second from last place.



The supplied brake line did not fit the BMW



Despite several attempts to rectify it, there were vibrations



The small aluminium splint looks cheap but it works

Brembo GT-Kit

Price: £3717

Part number: 1M1.9022A

Disc size: 380mm

Weight: 29kg

Value: 2/5

Response: 3/5

Pressure point: 2/5

Pedal Feel: 1/5

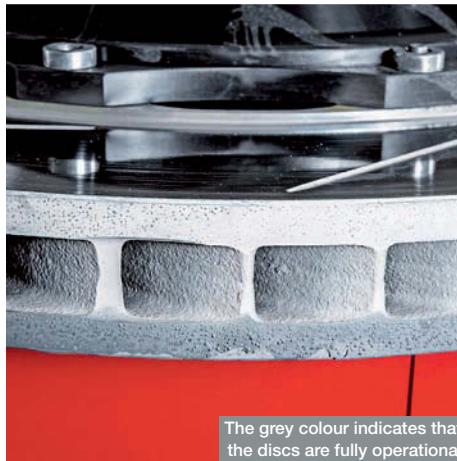
Distance: 2/5

Total: 2.0/5

Brembo is one of the most famous names in brakes and the Italian company has been catering for both motorsport and road applications for many years. Therefore, expectations were high. However, the results were disappointing. The installation of the most expensive system here was completed without complication and after the specified bedding-in procedure the testing took place. But the first tests provided a scare due to a softening brake pedal and a zero pressure point. After another fluid bleed, the situation then repeated itself again. It was often necessary to pump the pedal twice to regain the pressure point on the handling circuit, and, as if this was not bad enough, the braking distances weren't too impressive either. For the 100km/h test, the system managed only what the stock brakes could offer, but from 200 and 250km/h, the package provided the worst values here.



The solid strap on the seat prevents rapid pad change



The grey colour indicates that the discs are fully operational



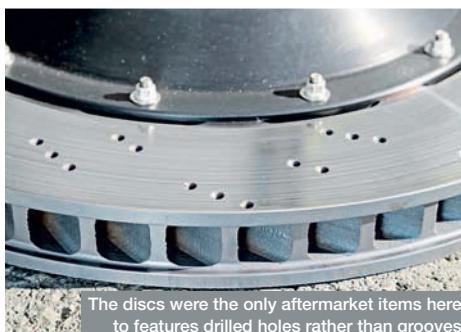
There were big issues with the pedal feel sadly

PFC High Performance

Price:	£3470
Part number:	3100.0008
Disc size:	372mm
Weight:	24kg
Value:	3/5
Response:	5/5
Pressure point:	4/5
Pedal Feel:	5/5
Distance:	5/5
Total:	4.4/5

Performance Friction (PFC) is again primarily known in the field of motorsport. An increasing number of race teams rely on these English-made brakes and that's no surprise since the system is the lightest here, weighing in at just 24kg. That makes it a useful 10kg less than the stock brakes, which is a huge difference.

However, the lightweight design comes at a price and also, uniquely, a set of four pads are used per calliper instead of just two, the aim of which is to improve the initial pressure point. Unfortunately, the calliper must be removed to replace the pads. During the test itself, the PFC package did impress with the shortest brake distance here from 250km/h. It also offered a very short, constant pedal travel and excellent response. The overall victory was lost primarily due to the high price.



The discs were the only aftermarket items here to features drilled holes rather than grooves

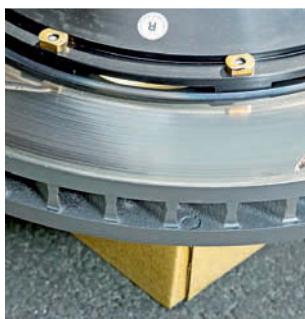


Stoptech Big Brake Kit

Price:	£2585
Part number:	BBM/M3E90-BBK.380x35.ST60
Disc size:	380mm
Weight:	34kg
Value:	5/5
Response:	5/5
Pressure point:	5/5
Pedal Feel:	5/5
Distance:	5/5
Total:	5.0/5

Stoptech did not shine during any of the various *Autobild* tests in previous years, so expectations here were modest. No weaknesses came to light during the installation of the bright yellow callipers (black, red, blue, and silver are all available) and the they feature a bridge that can be opened for easy brake pad replacement. The weight of the package is a little below that of the stock system.

After the initial bedding-in, the first attempt from 100km/h took achieved a stopping distance of 31.1 metres, which corresponds to a deceleration rate of 12.3 per m/s². The best result we managed was 30.6 metres and top results were also rewarded for the 200km/h and 250km/h brake stop sequences. There was also a consistently short pedal travel and the best response behaviour. Fading was not a problem, even under strong pressure and the victory in this test is well deserved.



In no time the seat cover is opened...

...and the pads can be changed quickly

BMW M3 Original Brakes

Price: £1624

Part number: NA

Disc size: 360mm

Weight: 36kg

Value: 3/5

Response: 4/5

Pressure point: 3/5

Pedal Feel: 2/5

Distance: 3/5

Total: 3.0/5

BMW brakes generally rank amongst the best in the sports car scene and the entire M range has impressed us with packages that offer consistent and fade-free stopping. The E92 M3 came stock with 360mm drilled rotors including single-piston callipers. The entire system weighs a reasonable 35.8kg; the K-Sport brake system is 2kg heavier in comparison. Should you decide to replace the brake setup then the dealer asks £1624 for the complete package with rotors, callipers, pads and accessories. As expected, the brakes achieve acceptable results here. The response is very good and from 250km/h and 200km/h the M3 stops a few metres earlier than even the Brembo package. Under stronger pressure, however, the pedal feel becomes increasingly soft and the drilled rotors become noisier. On the handling course, slight brake knock back was also noticeable after some laps.



CONTACTS:

AP Racing

Tel: 024 7663 9595

Website: www.apracing.com

K-Sport

Tel: 01274 683633

Website: www.ksport.co.uk

Brembo

Tel: 089 3700 1723

Website: www.brembo.com

PFC-Performance Friction

Tel: 01295 221020

Website: www.performancefriction.com

Stoptech

Tel: +31 341 759110

Website: www.stoptech.com

BMW

Tel: 0800 325 6000

Website: www.bmw.co.uk



100-0 km/h	AP	Brembo	K-Sport	PFC	Series	Stoptech
After 1 run	31,0 m (12,4 m/s ²)	31,5 m (12,2 m/s ²)	32,1 m (11,9 m/s ²)	32,2 m (11,9 m/s ²)	32,4 m (11,8 m/s ²)	31,1 m (12,3 m/s ²)
After 10 runs	30,2 m (12,7 m/s ²)	32,3 m (11,9 m/s ²)	31,8 m (12,1 m/s ²)	30,6 m (12,5 m/s ²)	31,9 m (12,0 m/s ²)	30,6 m (12,5 m/s ²)
After 20 runs	30,9 m (12,4 m/s ²)	31,7 m (12,1 m/s ²)	33,9 m (11,3 m/s ²)	31,4 m (12,2 m/s ²)	31,5 m (12,2 m/s ²)	30,7 m (12,5 m/s ²)

200-0 km/h	AP	Brembo	K-Sport	PFC	Series	Stoptech
After 1 run	124,9 m (12,3 m/s ²)	130,5 m (11,8 m/s ²)	122,3 m (12,6 m/s ²)	124,7 m (12,3 m/s ²)	128,4 m (12,0 m/s ²)	123,6 m (12,4 m/s ²)
After 10 runs	121,8 m (12,6 m/s ²)	137,4 m (11,2 m/s ²)	124,0 m (12,4 m/s ²)	124,5 m (12,3 m/s ²)	131,4 m (11,7 m/s ²)	125,8 m (12,2 m/s ²)
After 20 runs	124,9 m (12,3 m/s ²)	129,2 m (11,9 m/s ²)	122,0 m (12,6 m/s ²)	126,0 m (12,2 m/s ²)	127,3 m (12,1 m/s ²)	122,6 m (12,5 m/s ²)

AP Racing



The conclusion

A surprise here; the brake king Brembo failed in our comparison test. The Italian premium brand lost by a large margin, too, due to poor stopping results and the worst subjective impression when compared to the others. Even the standard brake system performed better.

The clear winner of the test is undoubtedly Stoptech. Its package posted top test results accompanied with the best pedal feel and high endurance. It also earned the well-deserved win thanks to the attractive price and use of normal pads. AP Racing achieved the best braking results from 200

and 100km/h while PFC offered the shortest braking distance from 250km/h and was the lightest package here. K-Sport achieved short braking distances but its overall result was hampered due to the strong vibrations it gave ●



1 Stoptech Big Brake



2 PFC High Performance



3 AP Racing Big Brake Kit



4 BMW Series



5 K-Sport 8-Piston



6 Brembo GT-Kit

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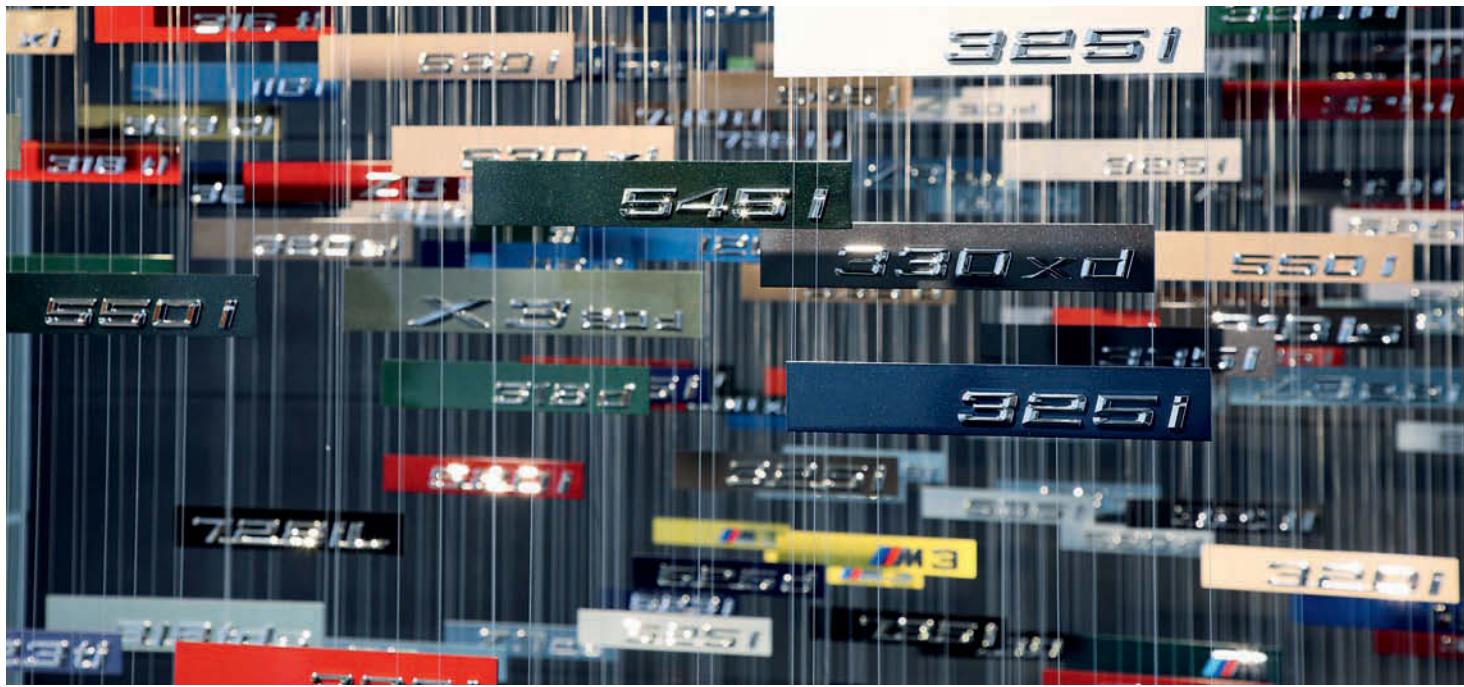
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CA Technologies 01202 822 792
www.ca-int.co.uk
ABP Motorsport 01270 567 177
www.abpmotorsport.co.uk



Number Crunching

If you get confused between your E and F numbers then peruse our comprehensive guide to BMW's model numbering system from the '02 to the latest hybrid and electric machines



E3 2500-3.3Li Saloon
1968-1977



E9 2500CS-3.0CSL Coupé
1965-1975



E10



E12 5 Series Saloon
1972-1981



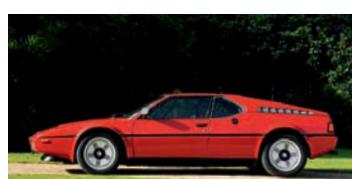
E21 3 Series Saloon
1975-1983



E23 7 Series Saloon
1977-1986



E24



E26 M1
1978-1981



E28



E30 3 Series Saloon
1982-1991



E30 C 3 Series Convertible 1986-1993



E30 5



E30 Z
Z1
1988-1991



E31
8 Series Coupé
1989-1999



E32
7 Series Saloon
1986-1994



E32 2
7 Series Saloon
LWB
1987-1994



E34
5 Series Saloon
1987-1995



E34 2
5 Series Touring
1991-1996



E36 4
3 Series Saloon
1990-1998



E36 2
3 Series Coupé
1991-1999



E36 C
3 Series Convertible
1993-1999



E36 3
3 Series Touring
1994-1999



E36/5
3 Series Compact
1994-2000



E36/7
Z3 Roadster
M Roadster
1995-2002



E36/8
Z3 Coupe
M Coupé
1998-2002



E38
7 Series Saloon
1994-2001



E38 2
7 Series Saloon
LWB
1994-2001



E38 L7
7 Series extended
wheelbase
1997-2001



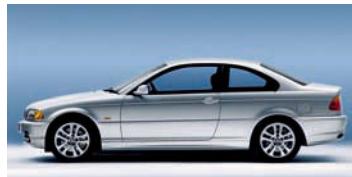
E39
5 Series Saloon
1996-2003



E39 2
5 Series Touring
1997-2004



E46 4
3 Series Saloon
1997-2005



E46 2
3 Series Coupé
1998-2006



E46 C
3 Series Convertible
1998-2006



E46 3
3 Series Touring
1998-2005



E46/5
3 Series Compact
2001-2004



E52
Z8 Roadster
1999-2003



E53
X5 SAV
1999-2006



E60
5 Series Saloon
2003-2010



E61
5 Series Touring
2003-2010



E63
6 Series Coupé
2003-2011



E64 6 Series Convertible
2003-2012



E65 7 Series Saloon
2001-2008



E66 7 Series Saloon LWB
2001-2008



E67 7 Series Protection
2001-2008



E68 7 Series Hydrogen
2005-2007



E70 X5 Sports Activity Vehicle
2007-2013



E71 X6 Sports Activity Coupé
2008-2015



E72 X6 ActiveHybrid
2010-2015



E81 1 Series three-door
2007-2011



E82 1 Series Coupé
2007-2014



E83 X3 Sports Activity Vehicle
2003-2010



E84 X1 Sports Activity Vehicle
2009-2016



E85 Z4 Roadster, M Roadster
2003-2009



E86 Z4 Coupe, M Coupé
2006-2009



E87 1 Series five-door
2004-2011



E88 1 Series Convertible
2008-2015



E89 Z4 Roadster
2009 on



E90 3 Series Saloon
2005-2012



E91 3 Series Touring
2005-2013



E92 3 Series Coupé
2006-2013



E93 3 Series Convertible
2006-2013



F01 7 Series Saloon
2008-2015



F02 7 Series Saloon LWB
2008-2015



F03 7 Series Protection
2009-2015



F04 7 Series ActiveHybrid
2010-2015



F06 6 Series Gran Coupé
2011 on



F07 5 Series GT
2009 on



F10 5 Series Saloon
2010 on



F11 5 Series Touring
2011 on



F12 6 Series Coupé
2011 on



F13 6 Series Coupé
2011 on



F15 X5 Sports Activity Vehicle
2013 on



F16 X6 Sports Activity Coupé
2014 on



F18 5 Series Saloon LWB
2010 on



F20 1 Series five-door
2011 on



F21 1 Series three-door
2012 on



F22 2 Series Coupé
2014 on



F23 2 Series Convertible
2015 on



F25 X3 Sports Activity Vehicle
2011 on



F26 X4 Sports Activity Coupé
2015 on



F30 3 Series Saloon
2012 on



F31 3 Series Touring
2012 on



F32 4 Series Coupé
2013 on



F33 4 Series Convertible
2013 on



F34 3 Series Gran Turismo
2013 on



F35 3 Series Saloon LWB
2014 on



F36 4 Series Gran Coupé
2014 on



F45 2 Series Active Tourer
2015 on



F46 2 Series Gran Tourer
2015 on



F80 M3 Saloon
2014 on



F82 M4 Coupé
2014 on



F83 M4 Convertible
2014 on



F85 X5 M Sports Activity Vehicle
2015 on



F86 X6 M Sports Activity Coupé
2015 on



I01 i3
2013 on



I12 i8
2014 on

LONGTERMERS

Another busy month for the fleet with the 135i continuing its journey down the tuning route, the M5 hitting the slopes, the 520d Touring departing for pastures new while Elliott introduces his new Alpina

F10 M5

This has been an expensive month for the M5. As mentioned in the last installment, the M5 was my chosen transport for a week skiing in the French Alps. I appreciate that a rear-wheel drive BMW, and in particular an M5, would not be most people's choice for a snow-covered winter driving holiday. Indeed 560 turbocharged horsepower and snow are not two things that usually go together well. However I had been very impressed by the handling of the car on its winter tyres, and BMW itself was adamant that the car was capable of going anywhere in any conditions that a normal car could traverse.

In preparation for the trip I purchased some snow chains. These are a legal requirement up in the mountains at this time of year. I decided that I didn't want a fine from the French police, and that it was best to get a properly fitting set of chains rather than a French petrol station emergency pair. BMW offer a set of snow chains for the winter wheels fitted to my M5. It has to as they are a legal requirement in some of the markets the car is sold in. However, the official BMW snow chains come in at £400. *Gulp!*

They are specifically designed to be easy-to-fit in the limited clearance of the M5's well filled wheel arches.

However £400 for a piece of kit that I am going to get very limited use from seems pretty steep. So I looked to other well-known suppliers. I eventually settled on a set of self tensioning Thule Chains for £137.95 and ordered them online through The Roof Box Company. The Roof Box Company was very helpful, its website was easy to use, and made selecting the correct sized chains a doddle. After ordering, it phoned to check that my order was correct, and that the chains were appropriate to the vehicle as there are many different sizes and fitments available and the chains were delivered the next day.

Before travelling, I thought it best to trial-fit the chains. This was definitely a good idea as I had never fitted chains before myself but luckily the website provided a detailed video of how to fit my specific chains. Following these instructions I had the chains on in just a few minutes. Thule provides some little rubber spacers that you can fit in to the links to minimise metal to tyre or rim contact. I fitted these to protect the alloy and the chains were a snug but easy fit. Getting them off was a little harder however, as the wheel has to be in just the right place, and you have to be careful not to get them caught on the brake disc heat shield. I was confident that if I needed them, I

could fit them and remove them at the roadside in the snow. I also checked that I was carrying all my usual French road trip stuff – first aid kit, bulbs, breathalysers, hi viz jackets and the such like.

I set off from the UK in the rain, and had an uneventful journey to my overnight stop in Reims. The Eurotunnel and Liber-t pass performing reliably, much to my relief. This combined with the excellent touring range meant that I didn't have to stop and get wet at all on this leg of the journey. The only slight fly in the ointment was that the sat nav isn't as up-to-date as it could be, and it gets very confused by the new Autoroute around Reims. Fortunately I know the road quite well, and knew when to ignore the directions of the 'nav.'

The next day saw a long drive down through France, around Switzerland, and then up in to the Alps and Morzine. The route was mostly Autoroute, and so the distance was gobbled up by the M5's mile-munching ability. The last 40km or so as we came of the Autoroute were more entertaining. The roads were mostly clear of snow, with just the occasional covering between the berms of cleared snow at the road sides. The car handled well, being sure footed in the freezing conditions, and

never feeling too big or overpowered, even on the narrower mountain roads. The car did valiantly, and made it to within 30m of the chalet with just its winter tyres.

Unfortunately our chalet was up a very steep uncleared ice covered road, and the last, steeper part of this was just too slippery for the Sottozeros to find traction. So I rolled back to a flat portion of the track, and fitted the chains. I wish I could say that this went as smoothly as it had at home. But I can't. In the snow and the cold, with a fully loaded car, the clearance around the tyre was just too tight. I struggled to get my hands in to the wheel arch to connect the chains. I did manage it in the end but it took around half an hour and I was frozen and filthy by the time I finished. With the chains on, the car drove effortlessly up the frozen hill and on to the driveway. There it stayed for the next week.

The last week of Jan 2015 saw some of the best snowfall in Morzine for several years. Nearly 12 inches fell every single day all week, including the day we left. I cleared the car off every day and had remembered to leave the wipers lifted off the windscreen, but was still met with an inch of hard ice under a foot of snow to clear on the day of leaving. I cleared the snow





from the air intakes and fired up the car, which started first time and left the car to warm through with the heaters and demisters on while I cleared the snow. An hour later, the car was clear. Unfortunately, the chip on the windscreen that I had repaired last year had failed in the cold and the windscreen had cracked in several places. With heavy snow on the ground, I set off gingerly for the main roads. With the chains on, the M5 behaved beautifully and very predictably. I was soon confidently cruising along. I had anticipated finding somewhere to stop after around a couple of kilometres but in the event, it was 30 snow-covered kilometres before we found a clear lay-by in which to remove the chains. It again took around 30 dirty minutes to remove the chains and clear any fouling on the brake shrouds.

The next 1000km were uneventful from the point of view of the M5. The French closed the Autoroutes at times to clear snow, which slowed the journey somewhat, but the M5 coped effortlessly with any weather and road condition thrown at it. All that testing BMW does clearly pays off, with the heaters, heated seats and lights making winter driving as painless as it could be. The only other small blip was with the entertainment system,

which yet again decided to throw a wobbly a couple of hours into the return trip. As well as dropping the iPod connection, it decided to switch off the entire system for around 40 minutes this time and then came back to life as randomly as it had failed.

Post ski trip, I booked the M5 in to have the windscreen replaced, and as it is nearly three years old, it was time for an MoT and an end-of-warranty check. The work was carried out over a couple of days to allow the windscreen to bond. The £44.95 MoT threw up no surprises, but the end-of-warranty check highlighted a weep from the gearbox. This was cleared up, and I was asked to bring the car back in 500 miles for further investigation. As the car was in for a few days, the software for the entertainment was completely reinstalled. We shall see if this solved the problems I have had with it...

Driving the car at night for the first time since the MoT, I was left in the dark. The dipped beam on the headlights had obviously been adjusted and now instead of it usual far reaching illumination, was barely lighting two car lengths in front. Fortunately, the headlights are easy to adjust, and a few turns of the adjustment bolt had normal service resumed. It highlighted to me just how

good the adaptive lights normally are, and what a difference poor lighting makes to night driving.

As the car's third year comes to an end, the demand for tax also arrived. Another £485 in Road Fund Licence was the cost of another year's motoring. With the warranty ending on the anniversary, and with the spectre of possible gearbox gremlins in the future I looked into further warranty options. BMW provide several levels of cover, excesses and payment schemes but I also looked at other warranty companies, though in the end plumped for the top level of cover offered by BMW with a reasonable excess. The cost of another year's peace of mind: £682.

So an expensive and fun filled month for the M5 – £2696.29 in total, some of which will be recouped from the insurance company but... ouch. Hopefully there won't be another month that expensive this year. I cannot express my admiration for the car enough, it is so well developed and reliable. It inspires great confidence to know that the car can handle anything that the weather can dish out, and not miss a beat. I would also hope that it inspires others to use their 5 Series in all weathers. If an M5 can do it, any 5 Series can. It also shows that fitting the right tyres

for the season makes a big difference, and to me at least has justified the cost of the winter tyres, which as a point of note, after over 20,000 miles of use still have 5.5mm of tread all over according to the MoT.

Would I take the car skiing again? Yes definitely! It was a lot of fun, and made a proper adventure out of what could have just been a journey. The Thule snow chains were brilliant once fitted, but was an hour of getting dirty and struggling around in the wheel arches worth £260 of savings? That is a harder one to answer. If you had asked me when I was lying in the snow fitting them, then no! In hindsight though, I may never use them again, so perhaps...

David Ingram-Hill



F10 M5

YEAR: 2012

MILEAGE THIS MONTH: 2329

TOTAL MILEAGE: 43,751

MPG THIS MONTH: 22.4

COST THIS MONTH: £2696.29

(windscreen, £1346.39; MoT, £44.95; RFL, £485.00; warranty, £682; Thule snow chains, £137.95)



E82 135i

So, how's life with a modified 135i proving to be? I'm pleased to report it's so far, so good on all accounts. I've got used to the JB4 now and switching between its various maps whilst on the move has become second nature. I've also been exploring the other settings further but have yet to really test out the launch control and full-throttle shifts just yet, largely due to the poor weather as I can hardly remember the last time I managed a decent drive without it being wet! And the way the torque comes in now tends illuminate the traction control light more than usual. Perhaps a day at Santa Pod Raceway will be a better environment to test their abilities. I'm certainly tempted to take a trip up there as the car feels electric at the moment, made all the better by the Forge intercooler I've just had fitted.

Thankfully, fitting seemed to be just

as easy as I had hoped. The front bumper didn't need removal as everything was accessed from underneath. Once up on a ramp the undertray was removed and the small bolts holding the original intercooler in place came off easily. Then it was just a matter of releasing the slightly awkward pipe connections before it all unclipped and could be removed. Side-by-side with the new Forge intercooler revealed just how much bigger it was. For ease of fitment, length and height wise there isn't much in it, but with a much deeper core it certainly looks far more capable. It was also a much sturdier construction and design, too. The original is made using plastic end caps that appear a little flimsy whilst the Forge item is made solely from lightweight aluminium.

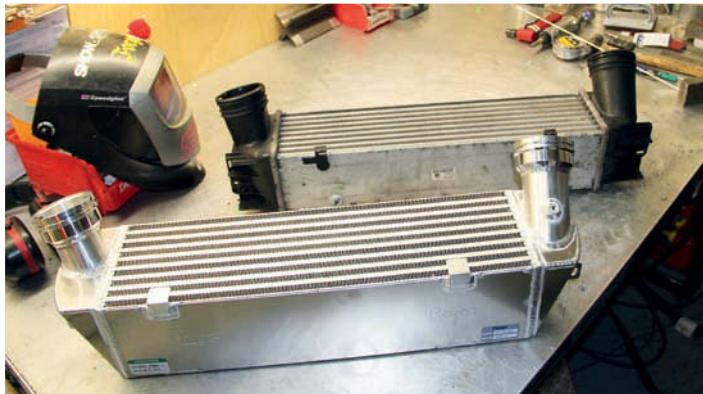
The shiny new intercooler popped in place easily enough and the angled

inlet and outlet pipes allowed the original BMW connections to be retained, although these once again were a little awkward to connect due to space limitations; there's not a lot of room in that engine bay!

I was pleased that nothing had to be modified or cut and everything slotted and bolted back together as it should, just as expected from a purpose-made product fitting. I've not had much time to drive it on the road since having it fitted, but immediately the car feels notably more responsive, seemingly building boost a little faster when on the move. I'll be putting it to the test next month to find out what difference it has made when I hopefully pop down for a dyno test to see the gains first hand.

Impressed by the fitment of the new intercooler I also decided it was time to upgrade some other parts with Forge replacements. This time it wasn't

about increasing power but improving reliability. As the car is modified I'm well aware that other parts need replacing and upgrading along the way, as there are common failures with tuned N54 engines. First up was the standard diverter valves, which channel unwanted boost when the throttle snaps shut back towards the intakes. As standard, these are made from plastic and feature plastic fittings and connections, too. As the car is now producing more boost pressure, I thought it would be good to upgrade these to the beautifully made metal replacements from Forge. These can attach to the standard BMW charge pipe that joins the intercooler to the throttle body and the kit comes with heavy-duty, reinforced silicone hoses, too. These have only just arrived so I will be getting them fitted next month and although I don't think they will make a whole lot of difference to the



Fitting was a relatively painless process aside from the odd connector but there hasn't been much of a chance to actually drive the car yet, at least not in the dry!



Above left: The VRSF chargepipe, Forge diverter valves and VRSF downpipes are all due for fitting next month. Left: The Forge intercooler is larger and much nicer quality than the BMW item



way the car drives at least I know they won't fail.

Whilst I upgraded the valves I also decided to change the chargepipe itself. Again, these are made from plastic and known to crack with increased boost levels. As I use the 135i as daily driver I can't afford to be left stranded due to a failure, so as a preventative measure I also ordered a replacement constructed from aluminium. No one does these in the UK; at least with the original twin diverter valve setup is still in place, so I started investigating the other options.

After looking through a few owners' forums the name VR Speed Factory, or VRSF, kept coming up, so I visited its website (www.vr-speed.com) and found the company was one of few that offered the chargepipe I was after with the standard twin diverter valve take offs. Fully expecting the pipe to cost a fair amount, as these things usually do, I was delighted to see the bargain price. Thanks to our generous exchange rates and even with postage and import tax calculated, the pipe would end up costing a bargain £225, which is a lot cheaper for this quality than anywhere else I found.

Of course, I should have just ordered it and been happy, but attracted by the prices and the idea of a combined shipping rate I started looking at what else the company had for my car and promptly came across its replacement downpipes. I had been dabbling with the idea of changing these as I've been advised replacing the standard items for these free

flowing versions releases some extra power, but more importantly, also improves response. But the price most companies charged for these pipes had made me put it off. However, the VRSF items looked fantastic and the price would work out at less than £340 delivered – less than half what some companies charged. I just couldn't resist at that value so I have placed an order.

I'm currently waiting for my parcels from America to arrive and I understand fitting the downpipes is quite a task, so that will be something to look forward to next month!

Simon Holmes



E82 135i

YEAR: 2007

MILEAGE THIS MONTH: 1405

TOTAL MILEAGE: 73,220

MPG THIS MONTH: 31.3

COST THIS MONTH:

£838 (Forge diverter valves, £245;
VRSF down pipes, £368;
VRSF chargepipe, £225)

CONTACTS:

www.burgertuning.com
www.forgemotorsport.co.uk
www.VR-speed.com

E28 Alpina B9

You might have thought that following the GP's departure last month things would have settled down in the Stiling household, but as quickly as one car has gone another has appeared.

Hunting down certain rare classic cars can be a drawn-out and painful experience. Months or even years can pass between examples being offered for sale and if you aren't there, poised at the exact moment to pounce, it's all too easy to be pipped at the post by another keen buyer. Buying cars like these is therefore as much about luck and fate as perseverance and patience. It is very rewarding though when you bag the prize.

This brings me neatly to the car you see in these pages. The aficionados among you will have already correctly identified it as an E28 Alpina B9 3.5, one of just 64 right-hand drive cars produced and one of what surely has

to be less than around ten left on the UK roads. When you consider BMW only made 187 examples of the E28 M5 you start to realise just how rare this model is.

In typical Alpina style the process of creating a B9 from a standard BMW production model was both thorough and effective in its execution. In November 1981, when B9 production started, BMW didn't even make a 535i and the M5 was still some five years away, so Alpina used production line fresh 528is as the starting point. The 2.8-litre engines were immediately removed and thrown away and replaced with an Alpina spec 'Big Six' 3.5-litre unit. A number of choice modifications to the engine took it from 218hp to a full fat 245hp including a more aggressive camshaft, high-compression Mahle pistons, reprogrammed fuel injection and a

thoroughly worked over head. Mated to a deliciously mechanical Getrag gearbox the result was a top speed of 152mph and a 0-60mph time of 6.3 seconds, figures all but identical to a Porsche 928S or Ferrari Mondial of the time. In 1983 no other four-door saloon car could hold a candle to that kind of performance.

The suspension received commensurate uprating with Alpina specific lowering springs and Bilstein dampers in an attempt to keep the notoriously lively rear end in some semblance of order. The bodywork was also upgraded with the best addendum 1980's aerodynamics could offer. This resulted in the now iconic and affectionately named 'cow catcher' front air dam and the rubber bootlid spoiler.

Wheels and tyres were upgraded to a set of staggered 16-inch turbines at 7- and 8-inches wide. Whilst incredibly modest by contemporary performance car standards these wheels are now a design icon and swap hands for ridiculous amounts of money.

Alpina didn't leave the interior alone either, all the main touch points came in for some attention. The original BMW seats were replaced with

fabulously comfortable Sheel buckets that came with some of the most striking striped cloth you will ever see! The steering wheel was replaced with a MOMO produced four-spoke affair at some 380mm in diameter – quite the contrast to a modern M Sport wheel. The original gear knob was replaced with a wooden Alpina item and a production plaque was proudly attached to the driver's side of the dashboard denoting the car's build number in the B9 lineage.

So, that's a B9 for you but why do I now have one? Well, I have a serious soft spot for these cars. I used to own the ex-Alpina press car registration number AAL 762Y, a black example with gold stripes but now sadly departed. It was a truly fantastic car and I think it's fair to say the driving experience offered by a healthy and well setup example is unlike other cars. I'll talk more about what it's like to drive one of these iconic cars in the months to come, but suffice to say I've always wanted another example, but the aforementioned rarity makes finding one nigh-on impossible. I therefore jumped on 'my' B9 when it was offered for sale.

Car number 188 was built in week



E61 520d SE Touring

52 in December 1982 and supplied to Sytner BMW in Nottingham who had the UK exclusive rights to create Alpinas for the UK market. It was specified in colour 146 Alpineweiss (Alpine white) with electric sliding sunroof, front and rear electric windows, on-board computer, green tinted glass and a limited-slip differential. I understand the car also sported the very period green and blue Alpina stripes from new but I am waiting for Sytner to confirm that.

Having undergone the Alpina treatment it was then registered in April 1984 and delivered to a firm of architects in Northern Ireland and remained there for four years before coming back to England in 1988. The car was then fastidiously maintained by a gentleman in London throughout the late '80s, '90s and Noughties with a veritable raft of invoices for some pretty eye-watering figures. It's this level of expenditure and care I believe, that kept the car alive and means it's here for me to enjoy now. We can all see the 'shark nose' revival happening around us with mint examples of E28 M5s and E24 M6s being offered for sale at £45,000 to £50,000 but this gent kept sinking money into the B9 when it would have been worth a fraction of that value. Hats off to you sir!

That's not to say that the car is in mint condition because it certainly is not. Mechanically the car is very good indeed but cosmetically there is plenty of room for improvement. I'll attempt to pull together the 'hit-list' for you by next month and you can see what there is to do.

I think the key here will be finding the correct balance of restoration versus usability. Yes, I want to show the car off at car shows and meets but I also want to use it without fear of its value being eroded by an errant stone chip or mark. I suppose it's better that I refer to it as a refurbishment then rather than a restoration? That definitely sounds more wallet-friendly too!

Having said that if B9 values follow the path now beaten by the M5 it could be a different story...

Elliott Stiling



E28 Alpina B9

YEAR: 1984

MILEAGE THIS MONTH: 46

TOTAL MILEAGE: 136,795

MPG THIS MONTH: No idea!

COST THIS MONTH:

£310 insurance, £230 road tax

As I come up to three years with my E61, I'd been wondering whether to run the 520d till it drops or start looking for the F11 I've pondered about, and although I want to see the new rear-wheel drive Alfa before committing I'm not sure I'll live long enough. Then something unexpected happened. One of my regular jobs has provided me with a car, sadly not a BMW, and this leaves the 5 Series a bit redundant. I considered mothballing it, but I already have several partially unused cars, so I've decided to part company with it rather than have it deteriorate and devalue.

After our rocky start I've become quite attached to the 5 Series. It swallows all my photographic equipment easily and family holidays in Europe have been a doddle, lugging everything we need rapidly across a continent. It's been a make-do Transit as well, bringing home doors for DIY and shifting a classic car engine and other chunky parts and all the time giving an entertaining drive and brilliant mpg. Having spent my first six months having the engine, tailgate loom and remote locking receiver replaced, half the car is younger than the mileage suggests, and the following two and a half years were trouble-free so it should carry on a good while longer.

To get it ready to sell I gave it the best clean it's had since its trip to Ultimate Finish last year, refitted its better summer wheels and finally got around to changing the blown Angel Eyes bulb.

These are a bugger to do. After being reminded you can only buy these from a main dealer – for 30 quid! – I remembered how inaccessible they are. With the main beam bulb out I didn't have enough knuckles to bend my fingers and reach it and long nose pliers or grips couldn't move it. In the end it was quicker to take out the headlamp unit than keep struggling.

I managed to get some pictures of the car before the heavens opened and had it for sale online before Saturday lunchtime, although I was shocked at how the values of these cars have fallen, as the recommended price was now under £5000, about £1000 less than I expected. I priced it at the top end bearing in mind the rear tyres were getting low so there was room to haggle!

After a couple of days I was getting fed up of phone calls with low ball offers and people wanting to part exchange, when a family member called saying he would be changing jobs and handing back his company car, and asked if the BMW was still



available as he'd be needing a car for the new job. We agreed £4500 and I delivered the car before the tax ran out. I'm good at buying cars, but less so at selling them, so it's strange driving off leaving 'my' car behind. I hope it gives good service with its new owner and doesn't revert to its 'Bee Emm Trouble-you' nick name.

When I bought the 520 it was because on paper it was the best choice, and after 80,000 miles it lived up to my expectations, proved to be the best thought-out car I've been in, and converted me into a fan of the brand. It's a pretty safe bet that when I hand back my company car, I'll be in the market for another 5 Series. And in the meantime if I can get it past my wife, maybe an old M3 or Convertible to keep things interesting...

Matt Richardson



E61 520d SE Touring

YEAR: 2008

MILEAGE THIS MONTH: 714

TOTAL MILEAGE: 154,267

MPG THIS MONTH: 46.3

TOTAL COST: £30



F30 320d Sport

KP12 is finally wearing some new tyres, although you'd be forgiven for thinking otherwise had you seen the attitude adopted by the rear of the car as I exited the tyre place and attempted to accelerate around the nearby left-hander. Some opposite lock was required to catch the wayward rear as it gracefully arced around a few degrees, doubtless a combination of a greasy surface (it had been quite icy that morning) and un-scrubbed tyres. Still, all good fun and at least my wife wasn't with me to tell me off...

My winter start-up routine is now a finely polished exercise first thing in the morning. Drop into the driver's seat and thumb the starter button, then a quick flick above to disable the auto stop/start feature (I'm yet to encounter anybody who doesn't do this). Then as the index finger on my right hand fingers the auto wipers switch, the first sweep of the 'screen coincides with my other index finger taking care of the various left-handed functions. So in quick succession, the cruise is activated, the adaptive lights are enabled, sport mode is selected, both heated seats are set to 'full furnace' mode, Radio 2 is called up via favourite button number two and if it's particularly chilly, the max demist button is pressed.

And therein lies a gripe actually. Can anyone explain to me why said button doesn't activate the max fan speed? One has to manually crank the fan to maximum which seems daft given what the function is designed to achieve. Worse, when pressing the demist button again to deactivate the

function, the fan speed doesn't return to the original setting. Somebody clearly wasn't thinking when they designed this process. Still, no matter. At the end of this early-morning ritual, I have several green lights on the dashboard, which for some childish reason really appeals, and we're good to go.

Whilst I'm on the subject of poor design, I'd also like to know why BMW insists on fitting a hi-fi system which remains on when the engine is switched off. This is just bonkers. You either have to manually press the button to kill your toons or worse, wait until you lock the car as you walk off, as this action also kills the system. Except you look like a numpty leaving the radio on as you wander off in the opposite direction.

Another complaint, although I may have whinged about this already in the past, is the fact that engaging Sport+ mode also kills the cruise control if it's active, and I cannot quite work out why. Presumably those BMW boffins figure that a constant throttle opening isn't good on greasy bends and so on (motorways or otherwise) but if we follow that line of thinking through to its natural conclusion, then one wonders whether we will eventually see strips of cotton wool appearing on the options list, for the permanently paranoid to wrap themselves up in before climbing aboard.

Besides, you can run 'normal' Sport mode with cruise active, but if you activate cruise when Sport+ is selected, the Drive Performance Control defaults to Comfort and not Sport, which is yet more badly

integrated design. It's the small things like this which a 15 minute test drive wouldn't really show up, but after a few months of driving the car one starts to wonder: 'what on earth were they thinking...?'

Thoughts have again turned recently to KP12's replacement, which admittedly is a long way off (currently planned for summer next year). But as it generally takes me quite a while to decide what I want to drive, plus with the two-year anniversary of KP12's purchase 'visible' from here as I write this in late February I have to admit that a little boredom is setting in, I start looking around and mulling over options-within-budget fairly early on.

The F10 M5 is now a possibility, as is the F06 Gran Coupé, but my recent 'premium' whinge cannot be ignored and I'll admit to having my head turned by several other cars in recent months. The Maserati Quattroporte keeps popping up (and I'm talking about the model which was most recently retired, not the poorly executed replacement and certainly not the diesel option) as they're not as poorly made as one would think – they sound gorgeous, look gorgeous and generally go like stink.

The Mercedes CLS also falls into this bracket and sub £20k now buys a pristine CLS63 AMG leaving funds in reserve for other needs but perhaps the most controversial option would be the Porsche Cayenne, and the Turbo model at that (although the naturally aspirated GTS model also appeals). These don't suffer from the same engine issues which can afflict the cooking 'S' models and come with

more bells and whistles, too. That same £20k or so buys a lovely 2009 example and despite the opinion-splitting styling (which I love, personally) you simply cannot deny that 2.3 tonnes being slung to 60mph in five seconds thanks to 500hp and 518lb ft of torque holds a certain cavalier appeal.

As to how to enjoy the car between now and then, well, the warranty expiration date in April offers up the possibility of a visit to Evolve, where an additional 45hp and 66lb ft can be liberated for a reasonable £550 and its Evolve Power Module. This would result in a 230hp and near 350lb ft 320d, which has the possibility of being very amusing, if not terribly good for the tyres.

As turning this device on quite clearly turns off any extended warranty however, I'd effectively be running the car without coverage after April. And given the fact it doesn't seem to be as well screwed together as the older ones I'm not sure it's a good idea at this point. Anybody out there had it done to one of these things?

Mark Williams (@QuentlyBentin)



F30 320d Sport

YEAR: 2012

MILEAGE THIS MONTH: 1677

TOTAL MILEAGE: 38,499

MPG THIS MONTH: 45.4

COST THIS MONTH: Nil



F20 118d Sport

A very boring month for the 1 Series I'm afraid. I started turning the fan direction to my feet before turning it off when I get home in the evening and it seems to have helped with the fogging on the windscreen, which is a good thing. I briefly transferred my moisture absorbing bean bag into the E39 but it was swiftly overwhelmed, so I think it's best suited to cars that get driven occasionally as it'll have a

chance to dry out in between absorbing sessions. Or you can get two and swap them over so one is working as the other is at home drying. Also, I took the 1 Series through a car wash – sorry, I know this will have detailing enthusiasts weeping into your copies of *BMW Car* but it was seriously filthy and I didn't have time to give it a hand wash so this seemed like a good idea. It worked, took about five minutes and

the car looked nice and clean, so it seemed like £3 well spent but it appears that it may have damaged the tip of my rear wiper blade as it's torn away from the arm slightly. I've not had a proper look yet but will investigate when I get a chance to walk all the way round to the back of the car... Other than that, it's business as usual really, which is a good thing I guess.

Elizabeth de Latour



F20 118d Sport

YEAR: 2013

MILEAGE THIS MONTH: 265

TOTAL MILEAGE: 13,862

MPG THIS MONTH: 48

COST THIS MONTH: Nil

The Everett Fleet

There isn't a great deal to report on this month, but happily the purple 318ti is coming ever closer to completion. Matt Summerfield, who also painted the car, did the wheels some time back, and they're the correct five-spoke wheels as fitted to the Sport models.

N563 KHU as it was, started life as a Lux model in October 1995 (so nearly 20 years ago...) and to make it into a Sport model isn't too involving – as well as the suspension and bumpers there is the black headlining, side mouldings with the M badges, seats, steering wheel and clear indicators. However, in 1995 there wasn't a regular Sport model at all – you had to specifically option the car as such and there weren't clear indicators back then. I prefer the amber ones anyway (they look superb on the violet paint) and many E36 owners are choosing orange lamps over clears.

Back to the wheels. I found a really nice clean set that were completely free of any corrosion at all, the backs of which were super clean without even much brake dust. Matt rubbed these down and painted them Titan silver with a generous coating of clear lacquer and with the new tyres and BMW centre badges fitted, I have to

say they do look superb.

Painting the callipers satin black and the brake disc bells in matt grey also adds to the effect and parked outside the workshop, it did look like a new one and a couple of passers-by commented on it. By April I'd like to have it MoT'd, taxed and insured so that in this, his 20th year, 5KXO can get some miles on the clock and do a couple of shows – maybe even Gaydon if I can slip it in with some Daytona violet E36 M3 and E34 M5 heroes. It has certainly come a long way from the sorry wreck it was in September 2008 when I bought it – a badly repaired write-off with a cracked cylinder head and every other fault in the book.

Elsewhere, the 318i Touring hasn't seen much use at all, the 730i hasn't seen any use full stop, the 318i Convertible has had an oil change and new number plates, and a fourth E36 has entered the fold – a £100 1994 318iS Coupé that is the basis of a new track car for 2015 and beyond. There will be more on that another time but despite the laughable price, it has the most amazingly rust-free E36 shell I've seen for a long time. Almost too nice to use it for a track car? Not with 150,000 miles!

Andy Everett



E24 M635Ci

It's been a quiet one for the big Six this month as dodgy weather and the looming spectre of needing to put the magazine together during the short month of February has put trips out in the M on the back burner. There are also a couple of items I need to attend to but again I've not got much further than putting them on the to-do list.

First up is the squealing fan motor that was lubricated by the chaps at BM Sport just after I bought the car, but it would seem that was only a temporary fix so a replacement is in order. I've been told it's not desperately expensive and isn't a pig of a job – certainly much better than on more recent machines – so I'm going to do my best to get that sorted next month. It wouldn't be a problem in the summer months but as it's been pretty cold recently, not being able to use the fan in the car for the awful racket it makes has been a bit of a pain. Must be getting soft in my old age... when I



had an old Triumph convertible in my youth I'd run around with the hood down in all weathers and as far as I can recall that car didn't have an operational heater of any type. Apart from the day when it deposited most of its hot coolant into the cabin...

The other thing that needs attending to is the speakers which are severely past their best. I'm not intending on fitting huge great bass bins or anything like that but I would like it if they didn't vibrate the minute the volume is turned up loud enough to hear the radio. To be honest this is something that seems worse when listening to Radio 4 and trying to keep up with world events on the *Today* programme is particularly irritating when any reasonably deep male voice sets the

speakers vibrating away. I want to keep the original look of the interior which severely restricts one's options as the 6x4-inch front footwell speakers have a very shallow aperture which means that fitting more modern speakers can be a bit tricky. The ones in the rear pods on the parcel shelf are, I think, less of a problem, but I think I need to pop into a good car audio specialist rather than just gaze aimlessly at speakers on the internet while wondering if they'll fit properly! Back in the olden days, when I previously ran a couple of E24s, I used to think absolutely nothing of taking some tin snips to the panel under the rear seats and installing a couple of small sub woofers but fortunately I'm older and wiser now!

For the time being I'm mainly just listening to the joyous straight-six, but you do get an awful lot of strange looks if you sit there revving the engine when you're sat in stationary traffic!

Bob Harper



E24 M635Ci

YEAR: 1988
MILEAGE THIS MONTH: 34
TOTAL MILEAGE: 161,488
MPG THIS MONTH: 20.6
TOTAL COST: Nil

E46 318i SE

It's taken me long enough, but the E46 is now wearing its new boots in the form of some rather grippy Yokohama W.drive V905 winter tyres in 205/55 R16 flavour of course.

When the car was MOT'd back in November it only just passed on the tyres it had. Considering they were budget 'ditch finders' with very little tread left, I knew it was time to dig out my wallet and get things sorted. Now, I always thought winter tyres were a bit of a gimmick, something for the

more financially willing to throw money at in a needless fashion. However, that was until I attended a test day using the various handling surfaces at the Porsche facility within the grounds of Silverstone.

Driving an array of twin cars – one with summer tyres, one with winter – I was charged with flinging the vehicles around like a loon to see the difference between the two. The difference was astounding, with unfathomable levels of grip available despite the slippery conditions generated by the facility's array of rubberised floors and water jets.



As such, I am converted.

I've had Yokohama rubber in the past and never been disappointed, so it made sense to stick with the brand. Plus, at approximately £60 a corner, they weren't too pricey either. The main thing though, is that the transformation has been quickly noticed. In the rain there's a lot more grip and, when faced with a freezing cold Brecon (complete with roads I couldn't walk on due to the frost), the car still felt sure-footed and safe. The only problem is, I left it so late that before I know it, I'll need to get some summer tyres as well! I really must be more organised.

Chris Pollitt



E46 318i SE

YEAR: 2003
MILEAGE THIS MONTH: 1723
TOTAL MILEAGE: 131,199
MPG THIS MONTH: 41.1
TOTAL COST: £270
(Yokohama W.drive V905 tyres, fitted)

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F10 535d

If you're thinking of replacing your E60 5 Series diesel for a more modern version then you may be surprised to learn that the F10 535d is fast becoming a bargain buy

Words: Simon Holmes Photography: BMW



History

The sixth generation of 5 Series arrived in the UK in early 2010. The longer and wider car was also a touch heavier but there was no denying it was a more modern machine in every way. Plenty of engines were introduced to the line-up but it wasn't until later in the 2010 season that the 535d was added as the range-topping diesel. Powered by the 3.0-litre, twin-turbo N57 diesel, the engine produced a mighty 299hp and 442lb ft of torque and offered performance that rivalled previous M cars. 0-62mph took 5.7 seconds with a top speed limited to 155mph, and, being a modern diesel, average fuel consumption was listed as a respectable 45.6mpg with emissions of just 162g/km. It came connected to the eight-speed

automatic; there was no manual gearbox option.

At first it was only available as an SE for £42,095 or M Sport trim for £45,320. The standard specification included Dakota leather, Bluetooth, cruise control with braking function and iDrive with a seven-inch screen plus plenty more. The M Sport gained you 18-inch M light wheels, an aero kit, Shadowline trim, sports suspension and inside, sports seats, anthracite headlining and a leather multi-function steering wheel.

In late 2011 the engine received a jump in power to 313hp and 464lb ft of torque and performance notably improved. 62mph now came in just 5.3 seconds, coupled with the same 155mph top speed. Emissions also dropped down

to just 148g/km and economy improved to a 53.3mpg average.

In 2013 the still fresh-faced Five was given an LCI update and small changes were made to the front and rear end styling. The side repeaters moved to the wing mirrors and there were a few minor interior changes as well. More importantly, the specification increased and DAB, sat nav and xenon headlights all became standard. The iDrive software also improved and now featured the touchpad controller. The Luxury trim level was also introduced, which featured chrome trim and finishers, sports seats, 18-inch wheels and exclusive stitching on the leather trim. The F10 535d is still current and won't be replaced until 2017.

Why should you buy one?

There simply isn't anything else on the market to rival what the F10 can offer for the money. For less than £25,000 you can get yourself a clean example that does everything you could ever want from a saloon and plenty more. Performance, specification and styling are all class leading but, more importantly, it's up-to-date, too. At this point in their lives the market is flooded with ex-company cars that have enjoyed a good life. Most of these seem to be the better-looking M Sport cars and if you look around it's not hard to find a real bargain. Keep a look out for decent options as an added bonus but don't get hung up chasing options as the standard equipment is more than enough to keep you happy. Ideally, aim for a late 2011 onwards car for the better engine and late 2012 onwards for the better specification.



What goes wrong?

Engine-wise the N57 is a strong unit so there's not a whole lot to worry about here. Earlier versions fitted to the previous generation of Five sometimes had an issue with timing chain failures but this isn't a reported problem on the F10. There has been the odd case of a blown turbo but other than that the F10 535d doesn't seem to have developed any common faults, at least not yet. Similarly, the eight-speed automatic is a gem and despite the odd report of issues in other platforms, it has proved reliable for the 5 Series.

However, it's not all plain sailing as there are a few minor issues to bear in mind. First off, the F10 does seem to suffer from a few annoying suspension related issues that range from odd noises to a tendency to pull very mildly to the right. Knocks, rattles or groans under acceleration, cornering or simply in a straight line are usually related to the Dynamic Drive or active roll

stabilization. This is the name given to the active suspension control, which constantly works to reduce body roll. Some owners get used to the odd noise but if it gets worse then it could be worth getting the pump and valves checked and possibly changed. A steering pull, or any other odd handling tendency is usually a trait of the Active Steering. Recalibration and a decent alignment check can cure this, but it has to be performed by someone that knows exactly what they are doing.

Other smaller faults include weather seals that allow wind into the cabin, which is annoying but can be replaced, and air-con that doesn't work. This is due to the condensers which are known to fail prematurely. Otherwise the only other issues are generally all software related. These can vary from flat battery warnings, which are often false, to iDrive systems that randomly reboot when they feel like it.



Running costs

The F10 was one of the first new wave BMWs to feature engine technology that really drove down the emissions. The result means they are actually very reasonable to tax and run, especially compared with previous 5 Series models. For a year's road tax the early, slightly less efficient cars cost £180 for a full year whilst the later cars cost a bargain £145 for a year, which is impressive considering the

performance available. Fuel consumption isn't quite as good as you might hope and BMW's figures are near impossible to reach. Still, a 535d can still post a decent figure on a steady motorway journey. Expect a figure in the very high 30s for early models and a touch more for later cars. Around town that figure will drop significantly but it should always level out in the 30s with a mix of driving styles.



F10 535d

ENGINE: Six-cylinder, diesel, 2993cc

MAX POWER: 299hp (313)

MAX TORQUE: 442lb ft (462)

0-62MPH: 5.6 seconds (5.3)

TOP SPEED: 155mph

ECONOMY: 45.6mpg (53.3)

EMISSIONS: 162g/km (148)

PRICE NEW (2010): £42,095

Figures in () for later model

How much to pay?

It is possible to bag yourself a car for less than £20,000 if you look around. We found a 2011 M Sport with 82,000 miles on it up for just £19,995. However, whilst that's an easy way into 535d ownership we would recommend spending a little more and gaining a lot. For £23,000 we found a 2010 SE with just 37,000 miles under its belt and £18,000 worth of extras fitted. Similarly, BMW's approved network brought up some bargains, including a 2010 M Sport car with 51,000 miles for just £22,995 and it's these cars make more sense for the cash. If you're after the later, better-spec'd cars then a 2011 M Sport with around 40,000 miles will usually cost in the region of £26,000-28,000 and a good 2012 car can be had for less than £30,000. After that you can bag yourself a virtually brand-new car for a lot less than list price and we found a 2013 M Sport with less than 8000 miles on it for £32,000.

Verdict

The important thing to consider when debating whether you can stretch to an F10 is that it's a current model that is still available to buy in showrooms new and looks and feels worlds apart from previous 5 Series models. The 535d offers an amazing combination of performance and efficiency, particularly if you find a later car. It's also a model that doesn't suffer from any serious faults or failings, so there's very little to worry about there. However, it's still relatively early days for the F10 so it would always be worth getting a car with a warranty and the best place for that is BMW approved used. Have a look of what's on offer and, we promise, you will be tempted...





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Realistic remap?

I'm a little confused so was wondering if you could help? I recently bought a 125i Convertible and would like more power from it. Is this easily possible?

I've heard remapping doesn't usually give good gains for naturally aspirated cars yet I've seen some people and tuning companies claim what seem to be extortionate figures from a simple remap alone. Should I trust these figures?

Paul Henderson

Usually, we would always be sceptical of anyone claiming a large increase in power from a remap alone on a non-turbocharged car, but the 125i is actually one of the few exceptions to the rule. This model happens to use a detuned version of the same N53 engine fitted to the later 130i models which means it's possible to gain a hefty power increase simply by remapping the car.



TECHNICAL TIPS

Our tame BMW technical expert, Andrew Everett, has a look at some common BMW problems

Z4 woes

E85 Z4s are tumbling now and they are often to be found for £5k or less. But is it wise to buy these as problems on these that can cost eye-watering amounts of money to fix?

Despite being E46-based, BMW replaced the simple hydraulic power steering set-up with an electric one – BMW's first fully electric power steering system. If I'm not mistaken, it uses current systems with the motor on the rack itself, not the steering column. Detuned now, it's a motor that looks like it came from a Series. The power motor is actually on the column itself and the rack is now a bit of a mess. The cars are at the age now where they can fail, it will cost about £1600 plus fitting and labour to fix – used ones are very rare and they must be correctly removed to avoid causing issues. However, at a Z4, there's no way some enterprising soul could not do an E46 power steering rack conversion, maybe I'm wrong about what about the electrical side?

The other common Z4 malady is the chain drive for the top. It's down in a hollow cavity in the front body and there is a drain hole for rain ingress. But as you guessed, a drain hole can block and the motor doesn't like being immersed in rain water very much. A hood can cost around £500 (plus a lot of labour) the last time I checked and even a reconditioned unit is £250. I think the reason of this tale is both think twice about buying a cheap Z4, and when you get one (or two, you never know), to check it over on a regular basis. Apart from that, though, the Z4 is a tremendous thing and the 3.0i version really is a rocketship.



Swirl flaps or not?

In the *What goes wrong?* section of the *10 Minute Guide* of the January 2015 issue you state serious engine issues include swirl flaps. I am unaware the 535d has swirl flaps in the inlet manifold. I know the 530d has but I thought the 535d didn't. I have owned an E60 535d for four years now. Just out of interest could you tell me if I am correct or not?

Dave Evans

Yes, we can confirm that the 535d also has swirl flaps. These cars came fitted with the M57 engine that was introduced in 2002 and both the early 242hp and later 282hp versions had swirl flaps fitted.

A revision to the swirl flaps means later examples are less likely to fail, but it's generally always advisable to get them replaced with blanking plugs anyway.



Top tips!

Just a quick one to say I picked up the February issue and noticed the new section in the back of the magazine. It turned out to be really handy as the driver's side wiper linkage on my Z4 has just failed, so on your advice I'm about to embark on custom fitting the parts from an E46. It looks relatively

simple to do but wish me luck!

Adam Fowler

It's nice to hear the advice we offer is of use, let us know how you get on. We've also introduced another new regular feature in the form of the BMW Buyer section on page 106.

Manual labour

After much debate I've decided to replace my 1 Series with a 2 Series and whilst I'm at it I'm going to treat myself to the M235i version. I'm going to buy an approved used car, but I've noticed the automatic versions outnumber the manual versions by about six to one. I'd like a manual really and it's making it hard to find a car in the right colour with the options I want.

Andrew Cowie

Good choice! The M235i is a peach. We assume from your letter you haven't driven BMW's new eight-speed automatic? We can assure you it's nothing like the older, slow-changing gearboxes you may be thinking of. It's a lightning fast 'box that makes great use of the engine. However, having driven both and spent plenty of time in our own long-term M235i manual, we'd actually still choose a manual as we feel it allows even greater use of the power band. It's personal opinion, though, so we'd suggest doing the smart thing and test-driving both types back-to-back to see which one you prefer. You may be surprised.



Z3 M mistakes

I was very excited to read the *BMW M Coupé Buyer's Guide* in the January issue. I'd wanted an M Coupé since school and am the proud owner of a 2002 S54 car with 28,000 miles. I was lucky enough to buy the car a year-and-a-half ago, just before the 'rush'!

The purpose of my email is to highlight a few errors and an omission in the article. First, the S54 engine in the M Coupé produces a claimed 258lb ft of torque (350Nm) at 4900rpm. This is the same as the claimed S50 torque figure, but at a higher rpm. This is stated in the owner's handbook, as well as in magazine publications at the time. The figure you have reported was on www.bmwregistry.com for many years and as a result has been referenced many times in various places. I have recently made contact with them and they have corrected the error.

The next issue is with the production figures of the S54 cars. Up until 2011 or 2012 the figure for right-hand drive S54 cars was indeed believed to be 168. Cutting a long story short, the researcher responsible for those figures counted the pre-production cars twice for S54



cars. The number of right-hand drive S54 M Coupés is 165. The European-spec left-hand drive S54 number was adjusted from 281 to 269 and the North American-spec cars 690 to 678, making the total number of S54 cars produced 1112. If you would like to know any more detail on these figures or to verify them yourself, then let me know.

The final error is the statement that the S54 received a new differential. This is the case in North America, where the S52 M Coupés had a different ratio, but the S50 and

S54 used the same 3.15 ratio.

Lastly, I would say that the bearing failure issue on S54 cars is worth a mention. The E46 M3s were recalled to have the problem fixed, but the M Coupés were not included in the recall, apparently because the lower power output or rev limit made them less susceptible. There have, however, been a number of reported issues. Furthermore, if the car is going to be modified, it is something that needs to be considered when choosing between the S50 and S54.

Patrick Hathorn

Thanks for taking the time to write in Patrick. First of all, our apologies: you are indeed correct. The torque figure we quoted was referenced from a previous article but after having checked through the archives it seems, as you have pointed out, this was wrong.

Build numbers are often a minefield and we rarely quote them for this reason; perhaps it's best to avoid them from now on!

As for the bearing failure issue, perhaps your letter will suitably alert potential buyers...

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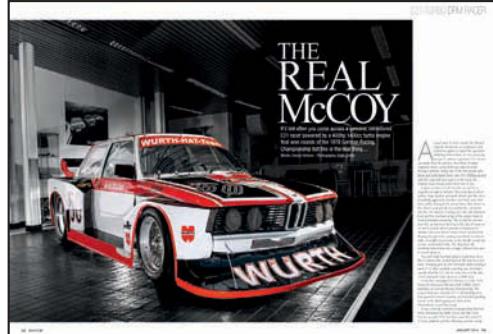
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BMW Buyer

Our monthly look at what's hot, or not, in the BMW marketplace

Words: Guy Baker

According to the latest registration data from the Society of Motor Manufacturers and Traders, new car market registrations grew 6.7% in January to 164,856 units, the strongest January since 2007. So don't feel too much sympathy for salesmen at swanky franchised dealerships – they haven't had it this good for years. But it's not all rosy in the BMW garden.

January wasn't the best month for BMW UK – which registered just 7923 cars, compared to rivals Audi with 10,747 and Mercedes with 7792 new cars. And as Rupert Pontin, head of valuations at Glass's, emphasises: "BMW, which has made it clear it will be looking to increase market share during 2015, faces stiff competition from Audi and Mercedes – which is also on the same objective."

BMW UK will need to work hard in the coming months to achieve this, although the new 1 and 3 Series models in 2015 are expected to add new impetus. And with all three premium marques heading towards becoming volume manufacturers, it is probably Audi that is most at risk of losing its brand kudos.

BMW is fast becoming seen as a volume player in the UK second-hand market too. "Looking at the used

market it is interesting to note that BMW's fastest selling used car comes in the form of the 2 Series, at an average 42.9 days to sale," Rupert reports. "This move to a new family niche seems to be proving especially popular with the retail buyer." And this is backed up by a strong demand for both used X3s and used X5s, so don't expect any serious bargains on well-spec'd, newer examples of these two at the moment.

There are, however, some decent deals available on other BMW models at main dealers, like a combined BMW UK and dealer deposit contribution of around £4500 towards a new 318d M Sport Saloon – yours for £299 a month over 48 months, with a customer deposit of £4999 and 5.9% APR finance.

At the other end of the spectrum you can buy a new 640d M Sport Coupe on just 2.9% APR finance, with a combined BMW contribution of £14,866 – however, you will need to stump up a ten grand deposit, and pay £589 a month for four years.

Outside the franchised network some of the best current deals are on BMW 5 Series. For example, www.uk-car-discount.co.uk is offering as much as £4500 off the list price of a new BMW 520i M Sport Auto or a 525d M Sport Auto. And if it's Approved

Used deals you're after then check out older higher-mileage X5 3.0ds at main dealers. We spotted a couple of Metallic Titanium silver examples with black Nevada Leather – both were September 2007 registered cars, one with 83,500 miles for £15,995, and the other with 68,500 miles for £17,850.

THIS
MONTH'S
BEST BUY!

BMW 325i CONVERTIBLE (E93) (2007- 2010)

At this time of year most convertibles represent seriously poor value for money. But as everyone now seems to want their drop-top to possess either a diesel powerplant or an M Sport engine, many of the remaining petrol-powered convertibles around aren't attracting the buyers they once did. And older examples of the E93 325i Convertible are especially prone to this. 2007-on SE examples start at around £8000, whilst a pampered 2008 325i M Sport is just £10,000. And with so few around you can even expect a discount!



Forecourt find

FIVE OF THE BEST

E60 M5s offer cracking value at the moment, but some have less-than-perfect histories. But not this impeccable 2005/55-plate black 63k mile example we spotted at Sutherland Specialist Cars in Somerset. In immaculate condition, the spec includes black leather upholstery, heated front seats, TV, Bluetooth, cruise control, the optional Light package, sat nav, a sunroof, adaptive headlights, a six-CD autochanger and an M Sport rear spoiler. And the full up-to-date service history includes the running-in service. The asking price for this cherished V10-engined masterpiece is a very reasonable £16,990. You might find cheaper examples, but you won't find a better one.

Web: www.sutherlandcars.com
Tel: 01275 472252 or 07813 961494



Top three £5000 convertibles

Britain's love-affair with soft-tops shows no sign of abating. Expect to see convertibles venturing out once again on to UK roads in their thousands over the next few months. But whilst buyer demand is generally high, you don't need to spend big. These three sports convertibles will all deliver rewarding wind-in-the-hair motoring for just £5000.



BMW Z3 2.2 SPORT ROADSTER (E37) (2001-2002)

Just because your sports car has a straight-six doesn't mean you have to put up with poor fuel economy. The five-speed M54-engined 2.2-litre Z3 might lack capacity compared to other models in the range, but still sounds great and packs 168hp at 6100rpm – good enough for 7.6secs to 62mph and 139mph and a parsimonious 30mpg combined fuel economy.



BMW Car's lowdown on the latest prices paid for average condition BMWs at auction. To find your nearest auction house check out: www.british-car-auctions.co.uk



And remember...

Always arrive early at car auctions, pick up the sales catalogue and examine the vehicles in the line-up before the bidding starts. In addition to the hammer price, you'll have to pay a small buyer's fee. You'll need to provide a deposit of at least £500 (in cash or by Maestro or Visa Delta debit card) but the balance of the purchase price and the buyer's fee can be paid via banker's draft, cash, cheque, telegraphic transfers, credit or debit card.

Prices paid last month for average condition BMWs at auction

Model	Trim/transmission	Year/registration	Mileage	Price
530i	SE Saloon, automatic	2003/53	106k	£2850
116i	SE (five-door), manual	2004/54	75k	£3150
320Cd	Sport, manual	2005/55	97k	£3750
530d	Sport Saloon, automatic	2005/55	104k	£6000
530d	SE Saloon, automatic	2004/04	32k	£6200
X5 30d	Sport, automatic	2004/04	105k	£6450
645Ci	Coupé, automatic	2004/04	59k	£7300
X5 30d	Sport, automatic	2005/55	81k	£7990
Z4 2.5i	SE, automatic	2008/08	40k	£8050
535d	Sport Touring, automatic	2005/05	65k	£8400
650i	Coupé, automatic	2006/06	74k	£9450
318d	M Sport Touring, manual	2011/60	75k	£10,000
X5 30sd	M Sport, automatic	2008/58	55k	£18,600
X3 20d	SE, automatic	2011/11	66k	£18,900
X6 30d	xDrive, automatic	2013/13	16k	£33,150

Prices quoted are hammer prices and will be subject to buyer's premium



BMW Z4 2.5i ROADSTER (E85) (2003 TO 2005)

Pre-face-lifted 2.5i Z4s are actually pretty good value at the moment, and with 190hp on tap the 146mph performance is more than quick enough for most. £5000 buys a cherished 2003 Sport, or a 2004 SE version, and nearly all examples boast a lower-than-average mileage. Make sure that there are no gaps in the service history though.



BMW ALPINA B3 3.3 CABRIOLET (E46) (1999-2002)

A rare sight on UK roads, the E46 328i-based Alpina B3 3.3 Switchtronic claims a luxury spec including full leather with Alpina crest stitching, Alpina body kit, 18-inch alloys, heated memory seats, cruise control, climate control and Bi-Xenon headlights. Also, a substantial 276hp means the B3 takes just 5.5secs to 62mph and can cruise at 165mph.

Many thanks to John Warren Cars (www.independentbmw.co.uk) for its assistance with BMW Buyer

FROM THE ARCHIVE...

Another selection of back issues showing what we were up to five, ten and 15 years ago



April 2010

Our main cover story this issue concentrated on depreciation-proof BMWs – classic icons such as the E30 M3, Z3 M Coupé, Z1 and the M635CSi. At a push all of these machines could be used on a daily basis and the best thing about them is that they wouldn't suffer the sort of rampant depreciation you'd experience with a new car. In the five years since we wrote the feature the Z3, M3 and M6 have all risen significantly in value with the Z1 seeing a small rise – it's odd how the drop-door Roadster hasn't really taken off yet as a really collectible BMW.

Elsewhere we pitched the new Z4 up against an E85 version and reckoned the latest machine was hugely more refined but perhaps less sporting. We also completed an epic run in a 740d where we pretended to be a captain of industry with a breakfast meeting in London, a lunch appointment in Paris and a dinner date back in London. It was a very, very, long day indeed.

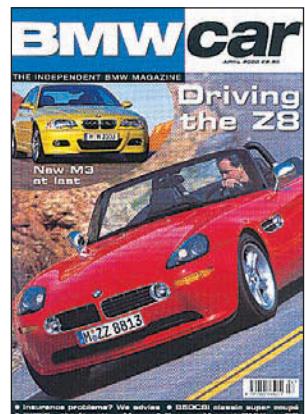


April 2005

The big story this month was our first drive of the 'de-uglified' 7 Series which was a far more handsome machine in LCI guise than it had been before. Along with the fresh looks were new engines and the awkward eight-way iDrive menus had been replaced with a far more intuitive system.

The face-lifted Seven wasn't the only new car to get the once over as we also had our first full UK drive of the new E90 320d and while we felt it was visually a little underwhelming in SE guise we did reckon it was, "faster, roomier and better specified, too."

Ten years ago the E60 535d was the latest BMW diesel to knock our socks off and just a scant couple of months after sampling a UK-spec car for the first time we were able to drive DMS's tuned example. And what a beast it was! Power rose to 320hp while torque was now a thumping 473lb ft and Dom Holtam, who put the car through its paces on Salisbury Plain, was impressed. "It's the kind of car that rearranges your internal organs at the same time as your preconceptions," he wrote. "If DMS's 330Cd demonstrator is the thinking man's M3 then this car is the thinking man's M5."



April 2000

This issue was jam-packed with M Power goodness and we spent ages trying to decide whether to put the first pictures of the new E46 M3 on the cover or to stick with our original plan which was our first drive of the new Z8. We ended up sitting on the fence and going with both!

Naturally enough we were hugely impressed with the Z8 although there were a couple of minor niggles. We concluded that: "It looks fabulous, sounds awesome, goes like a rocket and is genuinely practical. It's a shame about the gearshift and other minor niggles, but they're not the end of the world. The only real catch is that heavy £86,650 price tag."

That wasn't the end of the M Power theme though as we also had two more M-powered machines in the issue, too, but ones that didn't feature that most famous of letters in their model designations – the 850iCSi and the E30 320iS. The E31 was the subject of our *Buying Guide* while the 320iS had been recently imported to the UK and we reckoned it was a very creditable budget E30 M3.

BMW IN ADVERTS

A trio of ads from the 1980s and 1990s featuring the 633CSi, E36 M3 and the McLaren F1

1984: E24 633CSi



In this American advert BMW's copywriters were bemoaning the fact that there were so few 'proper' Grand Touring cars left on the market despite the proliferation of the GT moniker. It claimed a Grand Tourer had to have "superlative performance, sumptuous luxury and impeccable styling and craftsmanship," and, according to the advert, only one car remained true to the legacy of the GT car: the 633CSi.

The ad went on to extol the virtues of the car's engine, suspension and comfort and the "construction tolerances as fine as 4/100,000ths of an inch." It left the final word to *AutoWeek* who summed up the 633CSi as such: "The class of the field in a field of one."

1994: E36 M3 Luxury



The M3 Luxury was a US-market special that wasn't marketed anywhere else in the world. It featured exclusive Nappa leather upholstery, M Contour alloys, power seats, Walnut

trim, chrome interior door handles, cruise control and an OBC. It was marketed as a good way of "forgetting about the Dow, your clients and everything else" on your commute.

1995: E36 M3 Evo and McLaren F1



We love this advert for its simplicity, featuring just the 321hp E36 M3 Evo and the McLaren F1 with 627hp. The

slogan reads: "You wait years for an engine to break 100bhp per litre. Then two come along together."

Our tame BMW technical expert, Andrew Everett, has a look at some common BMW problems

N46 reliability

By and large, the N46 engine that replaced the N42 in the late E46 cars is proving to be a bit more reliable than the original Valvetronic unit. But that's not to say it will stay that way as it's really just that the N46 isn't as old, yet. Most BMW specialists agree that to keep this complex unit running well requires money to be spent on it now whilst it's still okay and not when the timing jumps a few teeth and damages something vital. The most important thing is to replace the timing chain itself, along with the guide rails and the tensioner plunger – replacing the lower one is a sump off job and adds to the cost considerably. The teeth on the crank sprocket and Vanos units rarely suffer, and replacing the chain and rails now is a very good plan, especially if it's done much over 70,000 miles.

Oil changes are also vital – forget the official CBM (condition-based maintenance) idea, we'd recommend an oil change with fully synthetic oil every 10,000 miles to prevent black death and condensation problems. The N42 and N46 engines suffer from this and it can result in a rusty dipstick as well as rust on the eccentric shaft. You'll know when the eccentric shaft is toast because the car will misfire at idle but smooth-out over 1200rpm... an MoT fail on emissions. As well as this, it's worth also fitting a new crankshaft sensor (genuine BMW only) as well as replacing the oil seals on the brake vacuum pump and the cam cover gasket to keep it oil-tight. To do all this would cost around £650 but on an E90 or late E46 with some value, it's money well spent.



Tailgate wiring

When the tailgate wiring on the E34 Touring started to gain a reputation for breaking around 20 years ago, you would have thought that BMW would have used a different system next time round. But it didn't, and the E39 Touring that replaced it in early 1997 had just the same arrangement, namely a thick wad of wires that go from the top of the roof at that back into the tailgate.

It must have seemed like a good idea until, after being weakened by the tailgate opening and closing, a wire breaks, followed by others. This is a real pain to fix. Unfortunately BMW even repeated the setup on the E61 Touring. This is a pretty big job to fix and on the E61 it can play havoc with various modules in the CANBUS system.

Look at other cars, namely GM and VW type stuff and they have a different system, one where the wires in the body terminate at the roof or base of the rear door aperture with a wide plastic bit of trim with several brass contacts. These make contact with spring-loaded brass pins in the tailgate so that when the tailgate is shut, there is power for the wiper motor, tailgate lights and so on. That system isn't perfect but it sure is a lot easier to fix and we think that it might be a good idea to get some bits from a breakers yard and do this as a permanent fix.

Auto 'box maintenance

Much is made these days of changing the oil in an automatic gearbox. But there are some things to consider. Take the oil in an engine, for example. Not only does it get searingly hot, it also has to absorb condensation as well as nasty by-products from combustion that inevitably escape past the rings. By 10,000 or 15,000 miles it's in a vile state and the engine certainly won't stand you leaving the same oil in there for 100,000 miles.

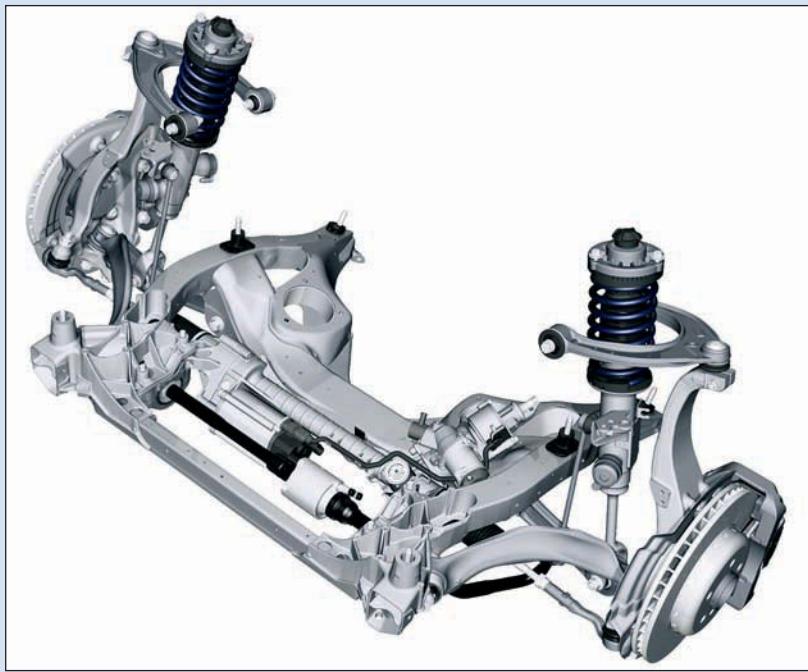
Gearbox oil, though, is different. Yes, it gets hot but nowhere near as hot as engine oil and it only has to deal with particles from the clutch friction discs. Unlike the old red stuff used 20 or 30 years ago, modern fully synthetic auto 'box oil is magic stuff. When was the last time anyone heard of an autobox that was slipping? We're not saying that autoboxes don't wear out any more but these days it's more breakage of an internal part that renders an autobox useless than good old wear and tear. On the E46 and E39 it was either a reverse or a forward brake drum that would split, resulting in sudden and total loss of drive. On E60s, and others with the six-speed 'box with mechatronics, it was either an oil leak from the sump gasket or the sealer between the two halves on the valve block failing that would ruin the gearbox. None of these were in any way related to the oil itself, and we've all heard of BMWs with over 200,000 miles and the original 'box works just fine. Opinion differs on whether you should change the oil. We think that dropping the sump, replacing the filter screen and topping up with fresh oil won't hurt, but we have every sympathy with those who stick to the 'if it ain't broke, don't fix it' mantra. The highest mileage we have seen is 240,000 miles on a 2006 E60 520d minicab and, as it purred through Sheffield after a good night out, it all seemed okay to me.



F10 front suspension clonk

The F10 of 2010 was the first BMW to stray from McPherson front struts since the New Class range of 1962. Instead it uses top and bottom wishbones with a long coilover type front shock absorber and spring unit and, by and large, it works okay although it's not clear why BMW went this route. However, according to a mate at Sytners, a few owners have complained that the car makes a noise from the front suspension over speed bumps and the like, a faint knocking noise that sounds for all the world like a knackered ball joint or damper. Some owners have been told that 'they all do that' when, no, they don't and they shouldn't; this is a £30k-plus car, not an old Sierra. We've found out via an internet forum that BMW has apparently introduced a revised front damper and fitting this to affected cars has provided a cure. If your dealer won't play ball then be aware that other firms make dampers for the F10 and F11 now. For example, Euro Car Parts supply Boge Sachs front struts for £150 each and Sachs is about as good as you get.

Another issue with these are the lower front ball joints. Due to the suspension design the joint is always loaded so that even when the car is up off the ground, the old trick of moving the wheel in all directions won't reveal it; you need to get in there with a long bar and tweak the suspension arm up and down. My main dealer contact tells me that these ball joints are becoming a common casualty at high mileage. However, stick to a known quality brand, such as Febi, and new control arms can be had for around £80 for the upper one and £100 for the lower one.



E39 bargains

It doesn't seem long ago that the E39 was new but, in fact, they were officially announced at the end of 1995 – almost 20 years ago. They were lauded as about the best car you could buy at any price and we certainly enjoyed the inevitable 520i or 520d (not sold in the UK) hire cars courtesy of Sixt in Germany. The first one I drove was in December 2001. It was on display in the lobby of Hamburg airport, and could be rented for about £40 a day! The silver 2001 520i (the 2.2) in absolutely basic steel wheel-spec with black cloth trim felt like the quality item it was and it dealt with snowy, wintery autobahns with disdain. They were so good that nobody could ever find any real weakness. Now, of course, they are old cars with the newest one being 12 years old. That means its great value. Forget your 530i Sports for a minute, I just found a 2003 520i ES in Topaz blue with 190,000 miles for £895 – and you know it'll be fine. Problems? The autoboxes are becoming a bit of a lottery now; bootlids and sills around the lifting eyes rust; radiators and water pumps need close scrutiny; and from '99 models onwards, ABS units (both ASC and DSC) fail – as do headlight adjusters, Touring rear air suspension (converting to coils is so easy) and other minor stuff. In many ways the E60 that followed is more robust and reliable but the E39 was such a good old bus – but they are just at that age now where to own one you need to be useful with spanners.

E46 boot floor cracks... again

Recently I had a 1999 323i E46 saloon in with a cracked boot floor. Unlike an E46 M3, a V-plate 323i isn't worth the expense of dropping the rear axle out or even a plate kit but there is a way to do a half decent strong repair if you're handy with a MIG welder.

Why does the boot floor crack? Well, the boot floor is triple-skinned in this area and in between the two lower skins is a small lump of thick steel with the threaded nut section that the axle bolt screws into. This is spot welded to the first and second skins with two or three spots. When the welds that secure this lump to the middle skin fail, it's unsupported and pulls through the lower skin. How did we fix it? First we welded up the visible cracks from underneath, easy with the exhaust rear box removed. Then we pulled out the boot carpets and cut a hole in the boot floor above the mounting lump. Not sure where it is? Unscrew the mounting bolt, pass a long screwdriver up through the mount and give it a whack with a hammer – this puts a dimple in the floor so you know where to cut. With the small section chopped out you can see the broken spot welds so seam weld them back together. On this 323i my mate welded another reinforcing plate on top before welding the hole above the mounting lug shut again. Grind off the welds, use some seam sealer and a bit of metallic green from Halfords – job done in two hours with added strength. In other words, unless you address the broken-away threaded mounting lug welding plates from underneath isn't really the best cure.



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F10 brake pads and electronic handbrakes

Someone, somewhere thought that the electronic handbrake (EPB) was a great idea but I can't say I'm a fan as I never had an issue with a simple lever between the seats. However, the original versions, as first seen on the 2001 E65 and later on by the Vauxhall Insignia, used a system where there is a big motor in the transmission tunnel that pulls on a pair of handbrake cables. The rear callipers were standard issue and the handbrake still used the shoes inside the disc.

However, starting with the F10 5 Series in 2010, BMW is now using the VW type system with electronic handbrake motors inside the callipers. These little motors whizz around at around 100 revolutions in a couple of seconds to clamp the pads against the rear discs. Great idea, but it means that to change the rear brake pads is no longer 30 minutes work on the drive like it used to be; no, you now need software to hold the handbrake pistons away as well as a special three-pronged tool to wind back the pistons fully. Try it without the software on a laptop with the relevant leads and chances are the car will power the callipers pistons fully out against the disc with the pads not fitted – nightmare. So you can't do it yourself now and a garage will charge you around £120 plus VAT to do a job that used to cost about £30 or £40. At the front, the sliding pins now need a 9mm Allen key, not the 7mm it used to be. You'll also find most Allen key sets go from 8 to 10mm.

Dual mass flywheels

I was speaking to a BMW specialist a while back about dual mass flywheels and they agreed that the one that was causing most grief was the M47 2.0d. The old five-speed manuals weren't too bad but the one that really gives trouble is the unit as fitted to six-speed manuals – that's the post-2003 E46 320d, the 118d, the 120d, the E90, and the E60 – fitted with that engine and box.

The BMW price is like something from Disneyland but these days the likes of Euro Car Parts do the flywheel for (a still eye-watering) £342 and it's the same LuK part as the original. Most specialists won't change a clutch now without doing the flywheel as they're almost always knackered, and you also need the special tools to remove the clutch cover if you're going to reuse it. These are self-adjusting covers and once removed without the tool to lock it in place it's a pain to reset it.

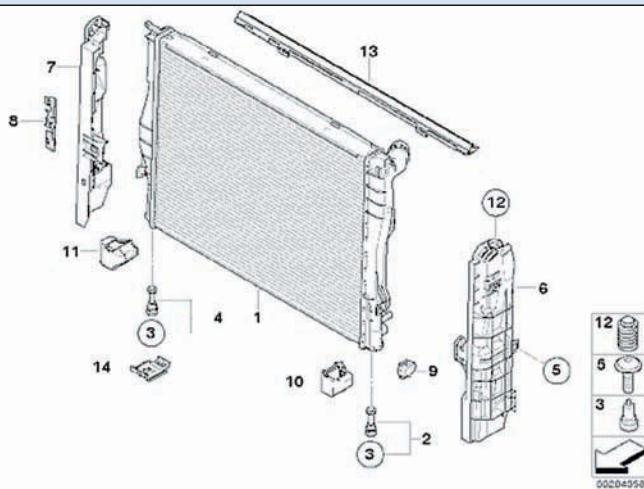
I know what you're thinking: what was wrong with the old type clutch that just got heavier as it came to the end of its life? But running with a knackered rattling flywheel is a bad idea. Said specialist had a 320d in with a knocking sound from the back of the engine and it was thought to be terminal flywheel failure. It was indeed completely goosed, and when all fitted up with a new flywheel and clutch, it still made the knocking sound. Turns out that the crank had fractured and was about to snap completely – that was an expensive clutch change. Don't be tempted by a solid flywheel conversion either as these cranks are designed to run with a DMF to absorb the cycle of vibrations and solid flywheel conversions are known to snap them.



Cheap radiators – don't do it!

Dave at Parkside Garage in Worksop (01909 506555) is never bothering with cheap radiators again. These are the ones that are the budget types with a short German sounding name sold by various parts specialists and motor factors. Similar rads can be found on eBay, too. Don't bother. On the old pre-1998 type cars where the hoses were secured by jubilee type worm drive clips you can sometimes get away with it. But on the 1998 onwards cars with the push fit hoses with the steel clip that snaps the hose into position, they are invariably a waste of time.

These hoses require the plastic rad stubs to be a perfect fit so that with a bit of grease on the O-ring in the hose end, they slide on and snap shut. But Dave has found that the stubs on the radiator are just that bit too small. "You fit the rad, snap the hoses on and fill with coolant. But when the hoses are moved around, coolant just drips out. They cost us time to fit and they're not worth the bother," he said. Moral of the story? Whilst a new rad from BMW may be too pricey, that's not to say one from the likes of Nissen, Valeo or Behr will be too dear, so have a look at these options.



Next Month

Driving the face-lifted Six

Plus

New 1 Series tested • Right-hand drive E30 M3 • Street sleeper – M3 powered E28 5 Series
• New X6 xDrive30d • Highly tuned 135i • South African E12/28 5 Series

May 2015 issue available to download 13 April and in the shops 16 April

(Contents subject to change)



BMW CONCEPTS: The cars they could have made

Turbo Concept

For a car that was first penned on paper over four decades ago the Turbo Concept has stood the test of time remarkably well...

In a time when BMW was still busy producing the 2002, can you imagine the stir this would have caused when it was first unveiled back in 1972? Launched to celebrate the Olympics in Munich that year, the Turbo Concept, known as the E25, was built on a modified 2002 chassis although it actually looked much larger in pictures. The four-cylinder, turbocharged engine that powered it was also borrowed from a 2002 Turbo but, like a true sports car, it was mid-mounted and connected to a manual gearbox. It was also tweaked to produce a respectable 276hp which allowed for sprightly performance; 62mph came in just 6.6 seconds, enough to rival the offerings from both Ferrari and Porsche at the time. Top speed was also an impressive 155mph but this was long before an electronic limit was introduced.

However, it was the styling that undoubtedly made the biggest impact and the Turbo Concept ticked off plenty of the typical 1970s styling traits. In a time

when many European car manufacturers were experimenting with aerodynamics, the E25 appeared to be BMW's test mule. Its wedge-shaped profile and low-slung front end complete with new-age pop-up headlights ensured it looked like a car from the future. Some pictures of the car also showed the rear wheels enclosed to further improve the aerodynamics. It was a quirky package, too. The extravagant gullwing doors pivoted from the centre of the roof with large supporting struts and at the back the whole rear clam structure raised as one to reveal both the engine and a small loading area at the very tail end of the car. It was finished in a period perfect fade-in paint job with a matching set of deep-dish wheels.

As a concept car, the E25 wasn't just a styling exercise either. It was packed with new, innovative features for its time. The front and rear bumper sections were filled with impact-absorbing foam and there were also revolutionary side impact bars to

protect the occupants. Most impressive of all was the radar-based braking distance monitor.

Inside the car the layout was positively futuristic, featuring a strip-type speedo in front of the driver and, unusually, a rev counter and other additional displays mounted to the right-hand side of the driver in the centre console. To the left was the advanced LED-based warning system.

BMW apparently used the car for extensive aerodynamic development and a second working prototype was produced. Although it never went any further it's clear the E25 had a huge influence in the design of the M1, which followed some years later. The front end is high-on identical to the 1978 M car, although the M1 was actually squarer. A lot of the other quirky traits, such as the doors, were toned down though. It's a shame as 1970s supercars have a reputation for wackiness, and the E25 Turbo Concept certainly had that. ●





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